

High Speed Welding - Increased Tube Production

The Liburdi **Pulsweld**® current sources are designed for continuous repeatable High Speed GTAW and PAW pulsing applications and connect easily into your automated line to increase performance and throughput by 25% to 200%. The systems are modular and are available in 200, 400, 600, 800, 1000 and 1200 Amps as required. Based on the **Pulsweld**® line of proven aerospace technology, configured specifically for high volume, high speed Tube Mill welding.

System Features:

True Square Wave DC Pulsing

- High frequency pulsing up to 20 kHz.
- Sharp rise time with no overshoot or undershoot.
- Output current is not affected by input power line noise and spikes.

Increased Production and Quality

- Increase line speed by 25% to 200%.
- Decrease in production defect rates.
- Superior burst strength of tube/pipe welds.

High Speed Current Controller

- Checks and adjusts current every 6 micro-seconds to ensure changes in line conditions, weld surface, or gap do not affect weld quality.

LCMX-HS Microprocessor Controller

- High performance and reliability from PC microprocessor based control.
- Complete selection and control of critical welding parameters through compact, easy to use hand held pendant.

Critical Weld Parameters

- Ready access to all parameters (pulse current, background current, pulse frequency, pulse duty cycle, starting current, final current, slope-up time, slope-down time).
- All your system needs to provide is the start/stop signal.



LT1000-HS 1000 Amp GTAW System

PULSWELD® - HIGH SPEED GTAW and PAW Power Sources



Specifications:

Output: Current: 200 to 1200 Amps
200 Amps per module
Accuracy: Better than 1%
Open Circuit: 75 V maximum
Duty: Continuous (100%)
Pulsation: Up to 20,000 Hz

Input: Voltage: 240 or 480 VAC
Current: 20 or 10 Amps/module
Frequency: 60 Hz (50 Hz option)
Phase: Single or Three phase

Dimensions: 22" (55cm) W x 39" (99cm) D x 47" (120cm) H
steel frame cabinet (single)
44" (111cm) W x 39" (99cm) D x 67" (170cm) H
steel frame cabinet (double)

Weight: 350 Lbs (158 kg) (single)
Depending on system configuration
1200 Lbs (543 kg) (double)
Depending on system configuration

Liburdi **Pulsweld**® offers a complete line of welding power sources which meet the most demanding requirements in industrial manufacturing and aerospace applications. The systems are modular and offer a wide range of innovative features that improve arc characteristics, weld quality and control over the weld process.

Applications

Typical tube mill applications include stainless steel and copper tubes varying from 0.020" to 0.080" (0.5 mm to 2mm) wall thickness welded at various speeds ranging from 12 to 35 feet/minute (365 cm/min to 1065 cm/min) using a single cathode. Experience has shown that the optimum speed obtained is largely established by the tooling and often the number of torches can be reduced from 3 to 1 by using a stiffer more concentrated arc.

Pure Current

Less than 0.5% peak to peak ripple

High speed, true square wave pulsing produces a narrow constrained arc with higher arc force, which results in lower heat input as compared with conventional power sources.

High Frequency Switching Regulator

Pulse width modulation frequency is 150 kHz

Current is controlled every 6 micro-seconds, providing assurance that the current is always correct in spite of abrupt changes in arc gap, surface contamination, input line spikes, etc.

Control Loop Bandwidth

Small and large signal bandwidth greater than 10 kHz

Fast response time provides precisely regulated current regardless of external forces such as power line interference. The power source maintains sharp rise times, with no overshoot for optimum pulsed current applications.

Drift Free Operation

Better than 1% accuracy

Stable, repeatable performance from all Liburdi **Pulsweld**® power sources. Weld settings are repeatable from unit to unit for consistency in multi-unit manufacturing operations.

Computer Compatibility

Eliminates interference between power source and computer

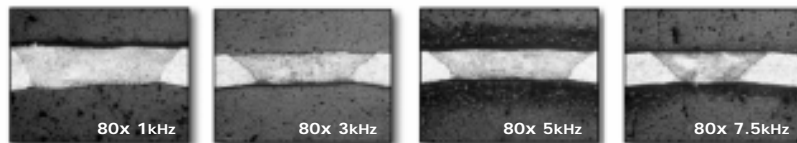
All systems are designed for computer control and eliminate conducted EMI through control cables. **Pulsweld**® arc starter designs do not employ high frequency radiation often found in other welding systems.

Standard Modular Systems

GTAW and PAW systems

200, 400, 600, 800, 1000 and 1200 Amp ratings available as modules for ease of maintenance and back up. Separate modular arc starter and/or plasma pilot arc console.

Optimized welds with high frequency pulsing, superior weld structure and burst strength.



Weld cross sections showing the effect of pulsing at higher frequencies on weld bead shape and microstructure.

For further information on the existing and future products, consult our Web Page at:

www.liburdi.com or **www.dimetrics.com**

or contact one of our offices located near:

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