

## High Precision for Low Heat Welding

The unique Liburdi *Pulsweld*® current source technology produces superior welds for the demanding alloys used in **aerospace and advanced manufacturing** applications. The 50/100 Amp Micro delivers precision current pulsing and precise 0.1 Amp control for low heat-input welding. Available with **GTAW and PAW combined in one unit** and configured for both **manual and computer control**.

## System Features:

### Precision Current Pulsing

- High precision, pure current pulsing technology
- Choice of 50 amp or 100 Amp configuration.
- Precise control over the full range in 0.1 Amp increments
- Reliable, low heat-input welds for the most demanding applications.
- *Pulsweld*® unique switching regulation provides fine adjustment of the current 150,000 times per second

### Demanding Applications

- Low-heat for successful welding of crack sensitive superalloys including Directional and Single Crystal castings, thin airfoil sections and knife edge seals.
- Fine detail welding with low heat input for welding on tool steels, high precision mold details, medical and laboratory devices, bellows, sensors, transducers, and battery cells.

### LCMX-50 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.

### Programmable Weld Parameters

- Ready access to all parameters; pre-purge time, start current, pulse and background current, pulse frequency and duty cycle and post-purge time.
- All under microprocessor control, for automated or manual welding.



**P50 GTAW/PAW Precision 50 Amp System with  
Pendant and built-in LCMX-50 Microprocessor Controller**

# PULSWELD® - 50 / 100 Amp MICRO GTAW and PAW Power Sources



## Specifications:

**Output:** Current: 0.1 Amp to 50/100 Amps  
Accuracy: Better than 1%  
Power: 1.5 Kw  
Open Circuit: 70 V maximum  
Duty: Continuous (100%)  
Pulsation: Up to 1,000 Hz

**Input:** Voltage: 208-240 VAC  
Current: 10 Amps  
Frequency: 60 Hz (50 Hz option)  
Phase: Single phase

**Weight:** Unit - 80 lbs (36 kg)  
Cabinet (with cooler) - 320 lbs (145 kg)

**Configuration:** GTAW or GTAW/PAW  
8.5" (21 cm) or 40" (101 cm) high cabinet  
Optional water cooler  
TIG or Plasma torches  
Foot pedal

**Dimensions:** Unit - 19" (48 cm) W x 24" (61 cm) D x 8.50" (21 cm) H  
Cabinet - 23" (58 cm) W x 30" (76 cm) D x 40" (101 cm) H

Liburdi Puls weld® 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.

### Pure Current

Less than 0.5% peak to peak ripple  
High Speed up to 1,000 Hz, 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  
Unlike inverter based power supplies, Puls weld's® unique higher speed switching and current regulation technologies allow the current to be precisely controlled every 6 micro seconds. This in turn provides 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 Puls weld® power sources. Weld settings are repeatable from unit to unit for consistency in multi-unit manufacturing operations.

### Precision Arc Starter

The Arc Starter uses an impulse design capable of initiating the arc on thin edges at very low current.

### Computer Compatibility

Eliminates interference between power source and computer

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

### Options for 50/100 Amp Micro

Gas Panel, Foot Pedal, Torches, Water Cooler, 19" (48cm) rack mount cabinets available along with integration with Automated Systems. Precise Múweld® micro plasma torches available.

### Standard Modular Systems

GTAW and PAW systems  
Puls weld® complete line of 50, 100, 200, 400, 600, 800, 1000, 1200 Amp power sources are available as modules for ease of maintenance and back up. Separate modular arc starter and/or plasma pilot arc units are available for flexible system configuration.

### Welding and Automation Support

Liburdi provides a complete range of robotic motion systems, vision systems, power supplies and controllers, as well as engineering support to develop the weld procedures and qualify the welds for metallurgical quality.

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

**[www.liburdi.com](http://www.liburdi.com) or [www.dimetrics.com](http://www.dimetrics.com)**

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