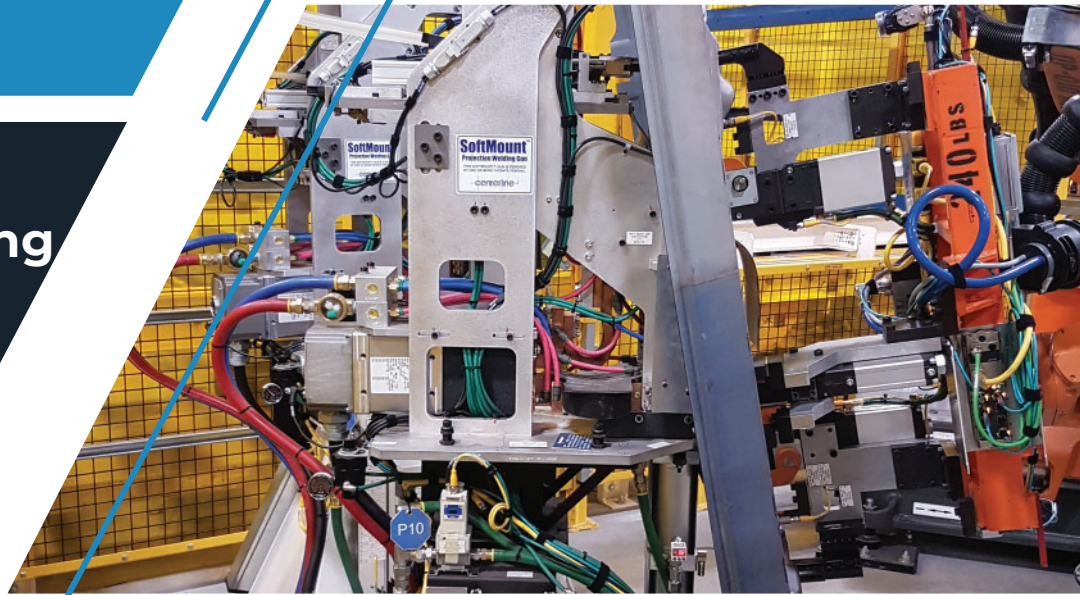


# CPRW

## Controlled Pulse Resistance Welding

Ver. 1.1



**CenterLine (Windsor) Limited**

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# What is CPRW?

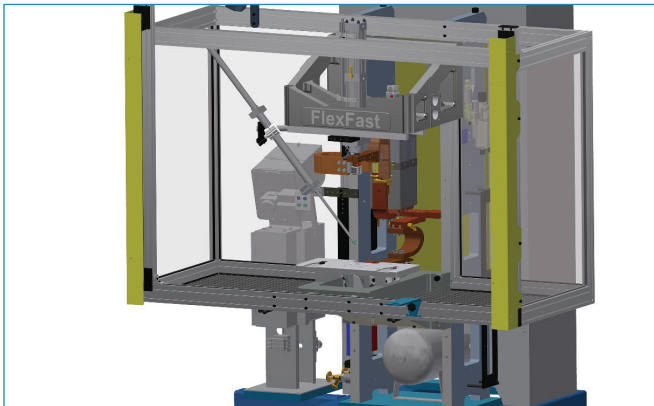
Controlled Pulse Resistance Welding (CPRW), is a new projection welding process that is built on the fundamentals of resistance welding and MFDC machines but leverages technological advances to further refine the process and decrease variability in results.

## Defining Characteristics

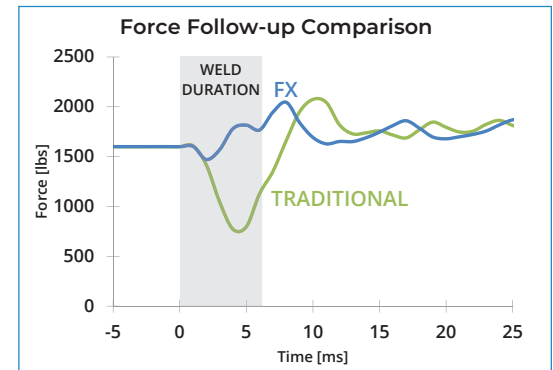
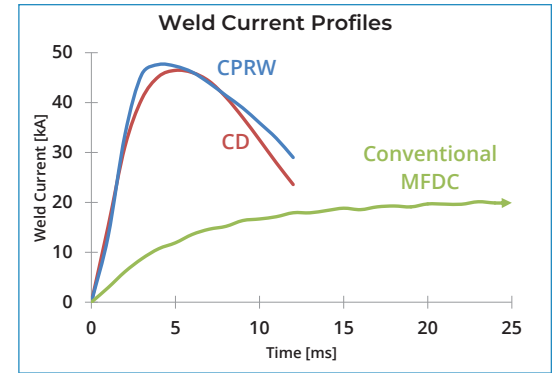
- High peak currents and short weld times to weld advanced materials.
- A purpose built, fast follow-up actuator designed to provide consistent weld force during short weld times (with no mechanical follow-up addition required).
- Specially selected electrode alloy and shape to accommodate the high material rigidity and provide good, consistent contact.
- Optimized transformer, weld control, machine parameters, and mechanical design to provide the most flexibility when selecting the current profile.

**All these upgrades build on each other to create the CPRW process.**

By adopting some of the successful characteristics from Capacitive Discharge (CD) machines, pairing the flexibility of MFDC equipment has allowed machine performance to be further improved. Since the process is built on conventional MFDC machines, CPRW machines should be familiar to anyone who has used conventional MFDC systems. Despite all the updates, the interfaces, equipment operation, and maintenance remain the same.



**FlexFast™ Fastener Welder**



The following products can all be outfitted with CPRW systems:

- **SoftMount™ Gun**
- **PedTec™ Gun**
- **FlexFast™ Fastener Welder (limited process)**

## Applications for CPRW

CPRW was built to handle challenging resistance projection welding applications that conventional MFDC machines can sometimes struggle with. Applications involving advanced and ultra-high strength steels, especially hot stamped material, can all benefit by applying the CPRW process. This is especially apparent in applications involving fasteners with small projections that historically had a lot of challenges attaining consistent results when welding to hot stamped steel. The process has seen success in other applications as well.

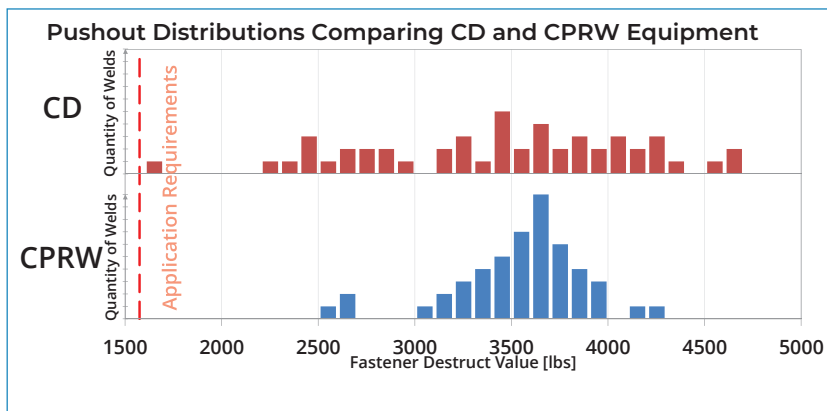
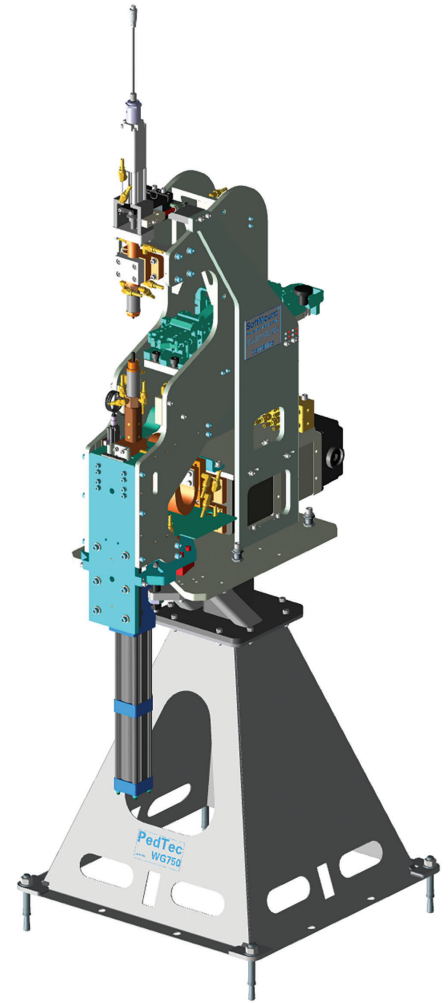


## Why choose CPRW?

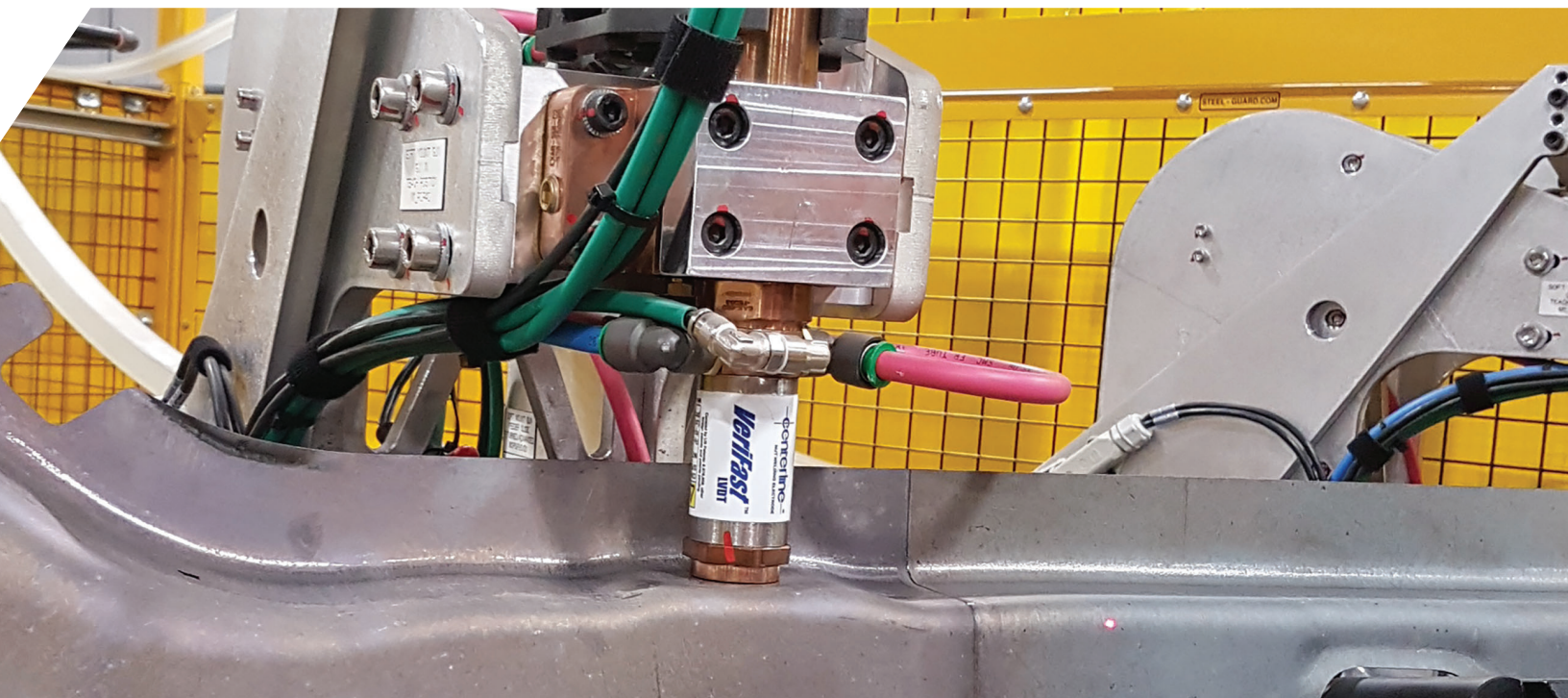
- Uses standard MFDC interface, operation, and maintenance; no need to learn new equipment or operational procedures.
- Improved results with CPRW when welding certain applications that conventional MFDC equipment may have struggled with.
- Enhanced equipment versatility and ability to repurpose. The high-powered components make it easy to reuse the equipment for a new program since it can weld a large portion of automotive applications.
- Improved consumable life. The short weld times reduce heat buildup in the consumables, increasing the duration between electrode maintenance.
- Desirable fracture modes. Instead of interfacial weld fractures with advanced materials, CPRW joints can change the fracture location to the base material or fastener material, giving a more consistent weld.

### SoftMount™ Gun

For CPRW Nut Welding Application



A histogram showing fastener destruct data of a CD machine and CPRW machine welding the same application.





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# CONTACT US

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