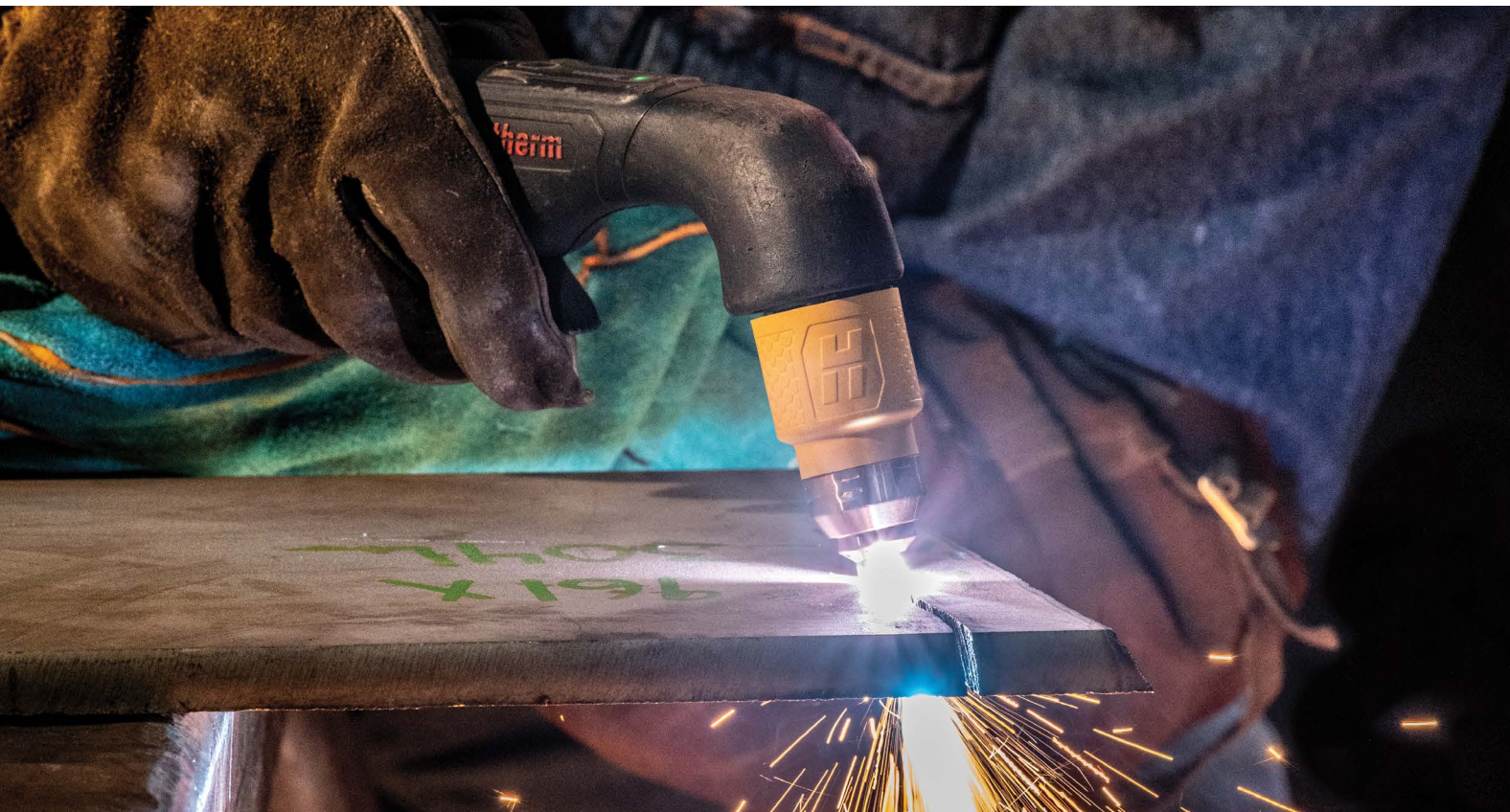# PROLINE
professional welding supplies

Hypertherm®

Hypertherm cartridge for Powermax® plasma systems

The simplicity of a single-piece consumable, optimized for maximum performance

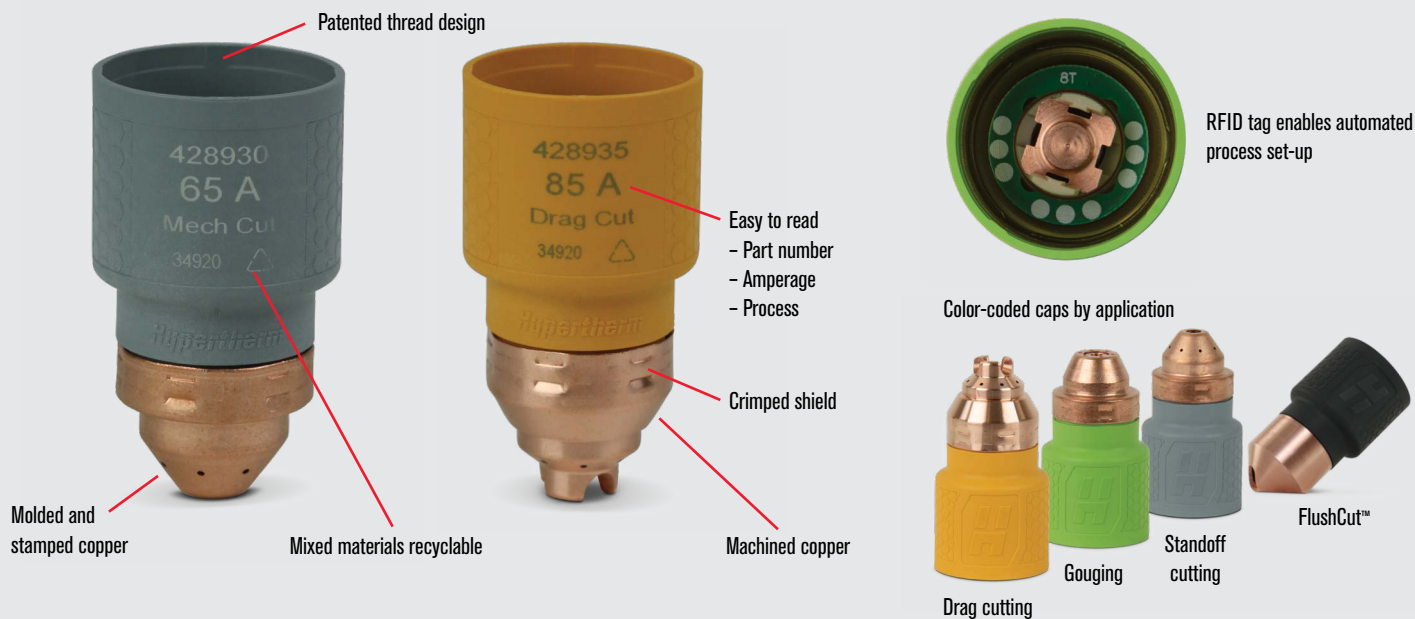## Advanced design improves and optimizes plasma cutting and gouging

The Hypertherm cartridge marks a revolutionary change to traditional plasma consumables. The cartridge is the product of several years of plasma engineering design expertise, combined with advanced manufacturing processes and materials. The result is a simplified consumable platform that is far from simple in performance.

Innovative consumable design requires equally advanced manufacturing capabilities

Hypertherm's cartridge for Powermax plasma systems looks different because it is different:

- Automated assembly of the components in the cartridge ensures perfect alignment
- Eliminates the question of which parts need to be changed, and when
- Cartridge-to-torch installation is a simple and fast three-quarter turn
- Management of consumable inventory is dramatically simplified

Patented thread design

428930
65 A
Mech Cut
34920

Molded and stamped copper

Mixed materials recyclable

428935
85 A
Drag Cut
34920

Easy to read
– Part number
– Amperage
– Process

Crimped shield

Machined copper

8T

RFID tag enables automated process set-up

Color-coded caps by application

Drag cutting

Gouging

Standoff cutting

FlushCut™

Background

Plasma system customers from around the world have identified common pain points when it comes to plasma consumable use including:

- Uncertainty over knowing which consumables should be changed, and when
- The expense, hassle, and downtime of managing inventory of multiple consumable parts
- Sub-optimal cutting outcomes due to improper consumable selection and process set-up
- Consumable life/durability not meeting expectations

Compatibility

Systems	Torches	Capabilities
Powermax65/85/105 SYNC™	SmartSYNC™ hand/ mechanized/robotic	▪ Automated process set-up ▪ Utilization data
Powermax45® XP/65/85/105	Duramax® and Duramax Lock hand/mechanized/robotic	▪ Requires a torch adapter (part 428951) ▪ Does not provide automated process set-up ▪ Does not capture utilization data

For adapter use with mechanized cartridges reference the cut charts guide for cartridge adapter on Duramax torches 811300MU.

For more information, visit:
www.hypertherm.com

Cartridge design benefits

- Consolidation of consumable parts into a single-piece cartridge results in proper alignment of components, and optimization of the plasma process. Cartridge eliminates the mixing of new parts with used parts common during standard consumable change outs. The result is improved and consistent cut quality outcomes.
- Cartridges have RFID tags that enable automated process set-up for Powermax SYNC™ systems using SmartSYNC™ torches. The tag also records valuable usage data for tracking consumable utilization and performance.
- Cartridges are color coded by process and feature easy-to-read laser marking. Selecting the correct cartridge for the job at hand maximizes life and provides optimal outcomes.

Hypertherm cartridges for Powermax systems are manufactured to uphold our high standards for quality and reliability. As part of the manufacturing process, we test-fire each cartridge to ensure proper assembly and function. As a result, there may be burn marks on the tip of the cartridge. This is normal and not a sign of damage.

Cartridge adapter
For the Powermax® torch series
Duramax® and Duramax Lock

Upgrade to the new revolutionary Hypertherm cartridge consumable platform with the installation of a torch adapter for Powermax Duramax and Duramax Lock series torches.

Easy to use

- Hypertherm's new single-piece cartridge consumable dramatically simplifies what is needed to accomplish any cutting or gouging application.
- Installation of a torch adapter onto a Duramax or Duramax Lock torch makes conversion to the cartridge platform - a simple process.
- Cartridge performance is optimized for cut quality and life and changing out cartridges is simple and efficient.

Cost effective

- The Hypertherm cartridge reduces costly mistakes caused by using the wrong consumable or not knowing which consumable needs to be changed and when.
- The torch adapter is durable for multi-use and does not require upgrading to a new torch platform.
- Consumable inventory management is streamlined and more efficient with fewer parts to purchase.

Compatibility

The torch adapter allows for conversion to the cartridge consumable platform if you have the following systems and torch types.

System	Torch type	Adapter part number
Powermax45® XP	Duramax® Lock hand, mechanized and robotic	
Powermax65®		428951
Powermax85®	Duramax hand, mechanized and robotic	
Powermax105®		

- Not recommended for use on Duramax retrofit torches for Powermax1000/1250/1650
- Not compatible with Duramax Hyamp™ standard or long style torches
- The cartridge consumable platform is standard for the new Powermax SYNC™ 65/85/105 systems with SmartSYNC™ torches (no adapter required)

The easy to identify cartridges are color coded by process to eliminate consumable part mix-ups and are clearly marked for amperage and part number . Cartridges are mixed material recyclable.

The adapter is designed to support multiple cartridge change-outs. Periodically inspect and remove the adapter from the torch to check for cracking and thread wear to determine when to replace.

The adapter adds .69 " to the operational length of the torch.

When using the cartridge on a Duramax or Duramax Lock torch with the adapter, no data is transferred from the cartridge to the system for automated process setup or to provide cartridge usage data. That functionality is available for Powermax SYNC systems with SmartSYNC torch technology.*

*SmartSYNC torches are not compatible with Powermax45 XP/65/85/105 A systems

Not to scale

Drag cutting and FineCut® for hand torches

Hypertherm cartridges		Replaces this stack-up				
Process	Cartridge	Shield	Retaining cap	Nozzle	Electrode	Swirl ring
105 A	428937	220992		220990		220994
85 A	428935		220854	220816	220842	
65 A	428931	220818		220819		220857
45 A	428927			220941		
FineCut drag cutting	428928	220931		220930		220947

Mechanized and FineCut for mechanized torches

Hypertherm cartridges		Replaces this stack-up				
Process	Cartridge	Shield	Retaining cap	Nozzle	Electrode	Swirl ring
105 A	428936	220993		220990		220994
85 A	428934			220816	220842 or 220777 (CopperPlus®)	
65 A	428930	220817 220955 (Deflector)	220854 or 220953 (Ohmic)	220819		220857
45 A	428925			220941		
FineCut mechanized cutting	428926	220948 or 220955 (Deflector)		220930	220842	220947
Ohmic ring	Kit 428895 Qty (3) rings per kit					

Reference the cut charts guide for cartridge adapter on Duramax torches 811300MU.
Mechanized cartridges can be used on hand torches if a stand-off is desired.

Max removal and max control gouging

Hypertherm cartridges		Replaces this stack-up				
Process	Cartridge	Shield	Retaining cap	Nozzle	Electrode	Swirl ring
Max removal gouging 105 A	428938	220798		220991		220994
Max removal gouging 45–85 A	428932		220854	220797	220842	220857
Max control gouging 105 A	428939	420480		220991		220994
Max control gouging 45–85 A	428933			220797		220857