

Hypertherm®

Powermax® gouging consumables

for Duramax™ and Duramax RT torch series

Max
removal



Max
control



Standard gouging

Amps	Gouging shield		Retaining cap	Nozzle	Electrode	Swirl ring
	Max removal	Max control				
45 – 105	220798	420480	220854	220797 220991 (105 A)	220842	220857 220994 (105 A)

Max removal gouging shield

Designed for aggressive metal removal, achieving deep gouge profiles and extreme metal washing applications.

Max control gouging shield

Designed for more precise metal removal, achieving a shallow gouge profile and light washing applications.



HyAccess extended gouging

Amps	Retaining cap	Nozzle	Electrode	Swirl ring
65	420413	420412	420408	220857 220994 (105 A)

HyAccess™ extended gouging consumables

Designed for gouging in hard to reach or confined spaces. Recommended to operate at a maximum of 65 A. HyAccess gouging nozzle, electrode and retaining cap also available in a starter pack: ordering part number 428446.

Recommended gouging shield

By application and depth profile



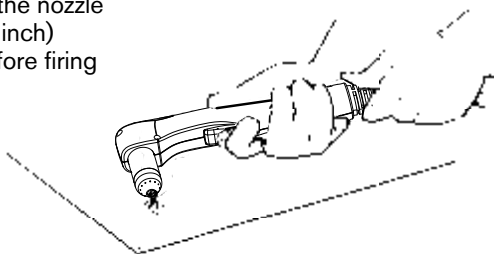
WARNING

SPARKS AND HOT METAL CAN INJURE EYES AND BURN SKIN. When firing the torch at an angle, sparks and hot metal will spray out from the nozzle. Point the torch away from yourself and others.

Gouge a workpiece

Steps:

1. Hold the torch so that the nozzle is within 1.5 mm (1/16 inch) from the workpiece before firing the torch.



Application

Depth of gouge profile

	1/4 inch (6 mm)	3/8 inch (9.5 mm)	1/2 inch (12 mm)	3/4 inch (20 mm)
Washing	▼	▼	●	●
Back gouging	▼	▼	●	●
Weld repair	▼ ■	▼ ●	▼	●

▼ 420480 Max control

● 220798 Max removal

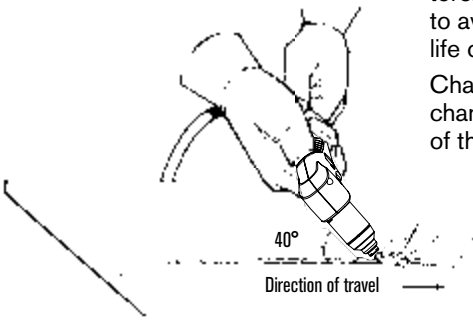
■ HyAccess™

2. Hold the torch at a 40° angle to the workpiece with a small gap between the torch tip and the workpiece. Press the trigger to obtain a pilot arc. Transfer the arc to the workpiece.

3. Maintain an approximate 40° angle to the workpiece as you feed into the gouge.

In other words, push the plasma arc in the direction of the gouge you want to create. Keep a small distance between the torch tip and the molten metal to avoid reducing consumable life or damaging the torch.

Changing the torch angle changes the dimensions of the gouge.



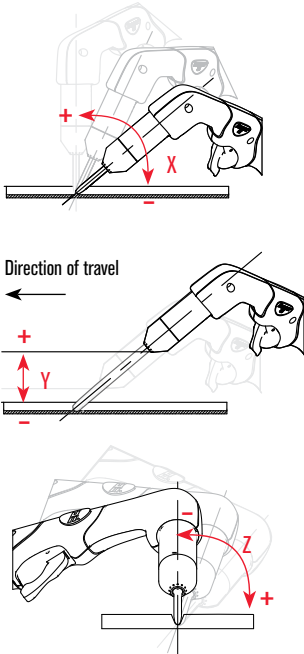
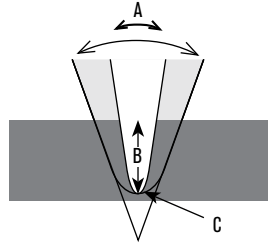
Note: A heat shield is available for added hand and torch protection (428347).

Gouge profiles can be varied by increasing or decreasing the following variables

- Speed of torch over the workpiece- faster gouge speeds decrease the depth and width of the profile
- Torch-to-work standoff distance – increase standoff to decrease depth and increase width
- Angle of the torch to the workpiece – increasing the vertical angle of the torch will decrease width and increase depth of the profile
- Current output of the power supply – decreasing the current of the power supply will decrease width and depth of the profile

Impact to gouge profile parameters

- X = vertical angle
- Y = arc stretch*
- Z = horizontal angle
- * Dependent on amperage



X, Y, Z adjustments		A	B	C
X	Increase vertical angle	↔	↑↓	∪
	Decrease vertical angle	↔	↑↓	∩
Y	Increase arc stretch	↔	↑↓	∪
	Decrease arc stretch	↔	↑↓	∩
Z	Increase horizontal angle	↔	↑↓	∪
	Decrease horizontal angle	↔	↑↓	∩

Hypertherm, Powermax, Duramax, and HyAccess are trademarks of Hypertherm Inc. and may be registered in the United States and/or other countries.

One of Hypertherm's long-standing core values is a focus on minimizing our impact on the environment. Doing so is critical to our, and our customers' success. We are always striving to become better environmental stewards; it is a process we care deeply about.

© 3/2016 Hypertherm Inc. Revision 010
896910

Hypertherm[®]
Cut with confidence[®]