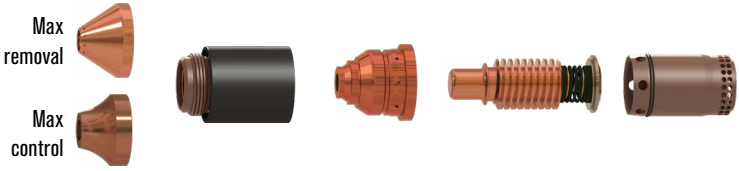
HYPERTHERM®
A Hypertherm Associates Brand

Powermax® gouging consumables

for Duramax™ Hyamp™ torches



Standard gouging						
Amps	Gouging shield		Retaining cap	Nozzle	Electrode	Swirl ring
65–125	Max removal 420112	Max control 420509	220977	420001	220971	220997

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 shallow gouge profiles and light material washing applications.

Recommended gouging shield

By application and depth profile



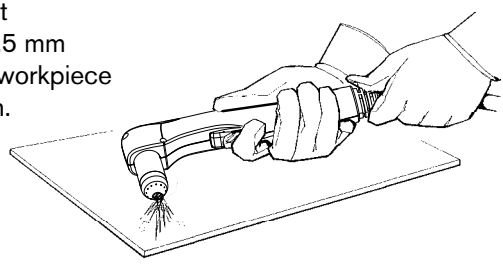
WARNING

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

	¼ inch (6 mm)	⅜ inch (9.5 mm)	½ inch (12 mm)	¾ inch (20 mm)
Washing	▼	▼	●	●
Back gouging	▼	▼	●	●
Weld repair	▼	▼ ●	▼	●

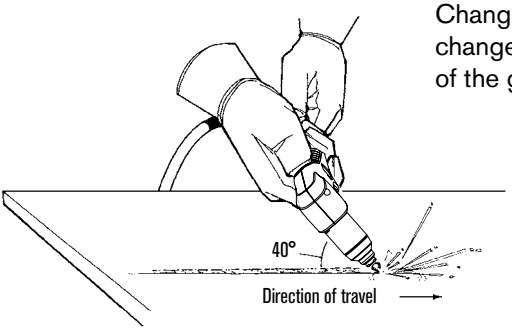
▼ 420509 Max control
● 420112 Max removal

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.

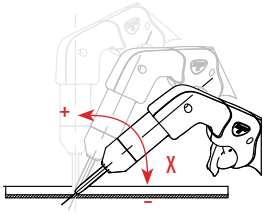


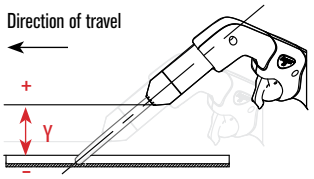
Note: A heat shield is available for added hand and torch protection (428348).

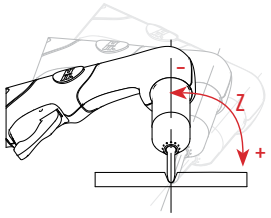
Impact to gouge profile parameters

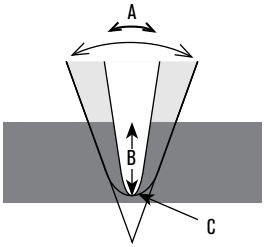
X = vertical angle
Y = arc stretch*
Z = horizontal angle

* 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			

For more information, visit: www.hypertherm.com

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