

# Hypertherm®

## HyPerformance® SilverPlus®

Quick Set-up

Compatible with:

HPR130®  
HPR260®  
HPR400®  
HPR800®  
HPR130XD®  
HPR260XD®  
HPR400XD®  
HPR800XD®



SilverPlus is a proven technology that dramatically extends electrode life, significantly reducing operating cost.

SilverPlus technology doubles electrode life on average over standard copper by allowing the electrode to burn deeper. For voltage-based torch height controls, the

torch-to-work distance will decrease as the electrode burns. This may require adjustment of the torch height control's arc voltage setting.

# Head to Head – SilverPlus electrode

HyPerformance SilverPlus lasts over 2 times longer than standard electrodes.

## To maintain torch to work distance

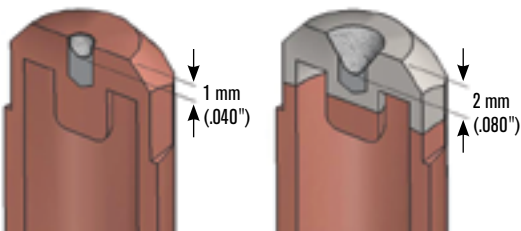
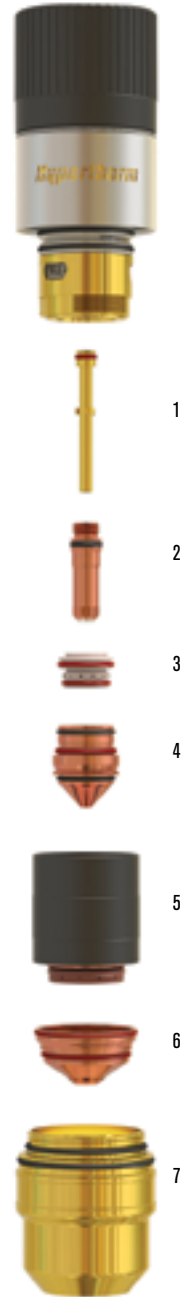
The voltage-based height control should be adjusted during the life of a SilverPlus electrode. At the time when you would replace a copper electrode, increase the height control arc voltage setting by 5 volts for the SilverPlus. This will maximize the life of your SilverPlus electrode, while preventing the torch from touching the plate during cutting.

For example, if you currently replace a copper electrode every shift, you would now increase the arc voltage by 5 volts at the time of normal replacement, and continue to use the same SilverPlus electrode until failure.

Purge torch for at least 30 seconds to remove residual moisture, which will damage the silver electrode. Cut charts for SilverPlus remain unchanged from standard copper.

HPRXD consumable description		130 A	200 A	260 A
1	Water Tube	220340	220340	220340
2	SilverPlus Electrode	220665	220666	220668
3	Swirl Ring	220179	220353	220436
4	Nozzle	220182	220354	220439
5	Retaining Cap	220756	220757	220760
6	Shield	220183	220761	220764
7	Shield Cap	220747	220637	220637

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4	Nozzle	220182	220354	220439
5	Retaining Cap	220176	220355	220433
6	Shield	220183	220356	220440
7	Shield Cap	220173	220398	220398



Copper electrode fully used

SilverPlus electrode fully used

SilverPlus electrodes burn almost twice as deep as standard copper electrodes, doubling SilverPlus life over a standard copper electrode.

## Our testing process

We used rigorous life tests to benchmark SilverPlus electrodes against our standard electrodes.

Our 20/20 test involves piercing metal and cutting for 20 seconds with 20% programmed ramp down errors. This means that 20% of the time, we purposely committed errors while cutting, such as running off the plate. This test protocol is intended to simulate the actual cutting environment.

We ran tests using Hypertherm's standard HPR oxygen cutting parameters. These procedures were repeated until the electrode no longer functioned.

The cut quality ranges, shown in these test results, meet the ISO 9013-2002 industrial standard that defines cut quality of thermally cut parts. The lower the range, the smaller the angle on the cut face.

## Results

At 130 amps, SilverPlus lasted an average of 2.6 times longer than copper electrodes. The SilverPlus electrode lasted a phenomenal average of 3,748 cuts on 10 mm (3/8") mild steel at 130 amps versus 1,440 cuts with the copper electrode. (See 130 amp graph)

At 200 amps, SilverPlus lasted an average of 4.4 times longer than copper electrodes. The SilverPlus electrode lasted an average of 2,283 cuts on 12 mm (1/2") mild steel at 200 amps versus 511 cuts with the copper electrode. (See 200 amp graph)

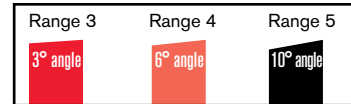
At 260 amps, SilverPlus lasted an average of 3.9 times longer than copper electrodes. The SilverPlus electrode lasted an average of 1,888 cuts on 20 mm (3/4") mild steel at 260 amps versus 484 cuts with the copper electrode. (See 260 amp graph)



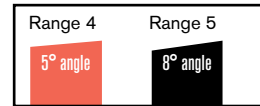
## Cut angles and ISO range

Shows maximum angle in range

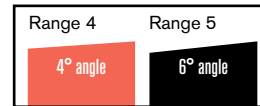
### 130 A-10 mm (3/8")



### 200 A-12 mm (1/2")



### 260 A-20 mm (3/4")

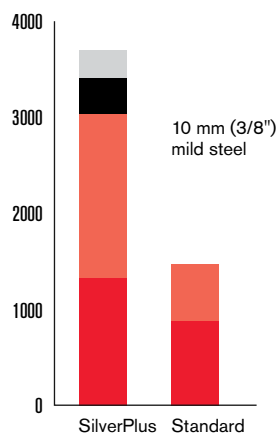


## Oxygen 20/20 parts life and cut quality

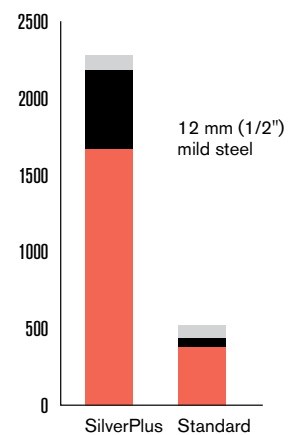
(Cut quality over life of consumables)

20-second tests with 20% rampdown errors

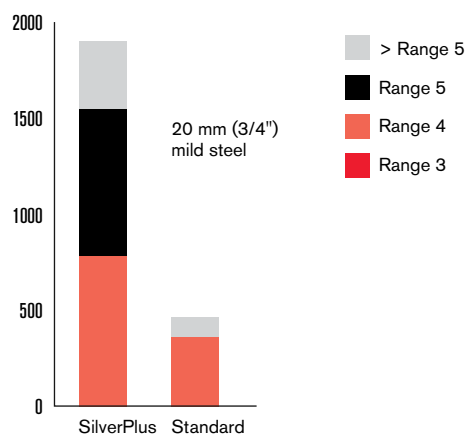
### HyPerformance 130 A



### HyPerformance 200 A



### HyPerformance 260 A



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[www.hypertherm.com](http://www.hypertherm.com)

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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.

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