



Hypertherm XPR Gas Combinations

Mild steel			Production Cut Range	Cut Cat. #1 Thicknesses	Gas Cost	Description of Cut
Amperage	Plasma Gas	Shield Gas				
30 A	O ₂	O ₂	.018" - .188"	.105" to .135"	Low	Best cut, weldable edge
50 A	O ₂	Air	.105" - .312"	.135" to .188"	Low	Best cut, weldable edge
80 A	O ₂	Air	.135" - .500"	.250" to .375"	Low	Best cut, weldable edge
130 A	O ₂	Air	.135" - 1.000"	.250" to .500"	Low	Best cut, weldable edge
170 A	O ₂	Air	.250" - 1.250"	.375" to .625"	Low	Best cut, weldable edge
300 A	O ₂	Air	.500" - 2.000"	.625" to 1.000"	Low	Best cut, weldable edge

NOTES:

Select amperages that offer your desired thickness within the "Cut Category #1" range to produce the highest quality cuts.

The Core, Vented Water Injection or OptiMix consoles all offer cutting steel using O₂ plasma.

The Vented Water Injection or OptiMix consoles are required to pierce 2" steel with argon assist.

The Vented Water Injection or OptiMix consoles are required to use argon as the marking gas.

Hypertherm XPR Gas Combinations

Stainless			Production Cut Range	Cut Cat. #1 Thicknesses	Gas Cost	Description of Cut
Amperage	Plasma Gas	Shield Gas				
40A	N ₂	N ₂	.036" - .250"	.105" to .135"	Med	Good face, may not be weldable, dry cut
60 A	N ₂	N ₂	.105" - .250"	.105" to .188"	Med	Good face, may not be weldable, dry cut
"	N ₂	H ₂ O	.105" - .375"	.105" to .188"	Low	Excellent face, weldable edge, wet cut
"	F5	N ₂	.105" - .375"	.105" to .188"	High	Excellent face, weldable edge, dry cut
80 A	N ₂	N ₂	.135" - .375"	.250" to .375"	Med	Good face, may not be weldable, dry cut
"	N ₂	H ₂ O	.135" - .500"	.250" to .375"	Low	Excellent face, weldable edge, wet cut
"	F5	N ₂	.135" - .500"	.250" to .375"	High	Excellent face, weldable edge, dry cut
130 A	N ₂	N ₂	.250" - .750"	.375" to .500"	Med	Good face, may not be weldable, dry cut
"	N ₂	H ₂ O	.250" - .750"	.375" to .500"	Low	Excellent face, weldable edge, wet cut
"	H ₂ -Ar-N ₂	N ₂	.250" - .750"	.375" to .500"	High	Excellent face, weldable edge, dry cut
170 A	N ₂	N ₂	.375" - 1.000"	.500" to .625"	Med	Good face, may not be weldable, dry cut
"	N ₂	H ₂ O	.375" - 1.000"	.500" to .625"	Low	Excellent face, weldable edge, wet cut
"	H ₂ -Ar-N ₂	N ₂	.375" - 1.250"	.500" to .625"	High	Excellent face, weldable edge, dry cut
300 A	N ₂	N ₂	.500" - 1.250"	.750" to 1.000"	Med	Good face, may not be weldable, dry cut
"	N ₂	H ₂ O	.500" - 1.500"	.750" to 1.000"	Low	Excellent face, weldable edge, wet cut
"	H ₂ -Ar-N ₂	N ₂	.500" - 1.500"	.750" to 1.000"	High	Excellent face, weldable edge, dry cut

NOTES:

Select amperages that offer your desired thickness within the "Cut Category #1" range to produce the highest quality cuts.

Select gas combinations with a "High" gas cost only when a weldable edge is required.

The Core console allows cutting with the N₂/N₂ process at all amperages.

The Vented Water Injection or OptiMix consoles are required to use argon as the marking gas or water as the shield.

The OptiMix console is required to use H₂-Ar-N₂ mixtures for the plasma gas.

Some gas combinations will produce cut edge faces that will require abrasive grinding to allow welding on the edge.

Hypertherm XPR Gas Combinations

Aluminum			Production Cut Range	Cut Cat. #1 Thicknesses	Gas Cost	Description of Cut
Amperage	Plasma Gas	Shield Gas				
40A	Air	Air	.036" - .250"	.100" to .125"	Low	Oxidized face, not weldable, dry cut
"	N ₂	N ₂	.036" - .250"	.100" to .125"	Med	Good face, may not be weldable, dry cut
60 A	Air	Air	.105" - .250"	.100" to .188"	Low	Oxidized face, not weldable, dry cut
"	N ₂	N ₂	.105" - .250"	.125" to .188"	Med	Good face, may not be weldable, dry cut
"	N ₂	H ₂ O	.105" - .375"	.125" to .188"	Low	Excellent face, weldable edge, wet cut
80 A	Air	Air	.187" - .375"	.250" to .375"	Low	Oxidized face, not weldable, dry cut
"	N ₂	N ₂	.125" - .375"	.250" to .375"	Med	Good face, may not be weldable, dry cut
"	N ₂	H ₂ O	.125" - .500"	.250" to .375"	Low	Excellent face, weldable edge, wet cut
130 A	N ₂	N ₂	.250" - .750"	.375" to .500"	Med	Good face, may not be weldable, dry cut
"	N ₂	H ₂ O	.250" - .750"	.375" to .500"	Low	Excellent face, weldable edge, wet cut
"	H ₂ -Ar-N ₂	N ₂	.250" - .750"	.375" to .500"	High	Excellent face, weldable edge, dry cut
170 A	Air	Air	.250" - 1.000"	.500" to .625"	Low	Oxidized face, not weldable, dry cut
"	N ₂	N ₂	.250" - .750"	.500" to .625"	Med	Good face, may not be weldable, dry cut
"	N ₂	H ₂ O	.375" - 1.000"	.500" to .625"	Low	Excellent face, weldable edge, wet cut
"	H ₂ -Ar-N ₂	N ₂	.375" - 1.000"	.500" to .625"	High	Excellent face, weldable edge, dry cut
300 A	N ₂	N ₂	.375" - 1.000"	.750" to 1.000"	Med	Good face, may not be weldable, dry cut
"	N ₂	H ₂ O	.500" - 1.000"	.750" to 1.000"	Low	Excellent face, weldable edge, wet cut
"	H ₂ -Ar-N ₂	N ₂	.500" - 1.500"	.750" to 1.000"	High	Excellent face, weldable edge, dry cut

NOTES:

Select amperages that offer your desired thickness within the "Cut Category #1" range to produce the highest quality cuts.

Select gas combinations with a "High" gas cost only when a weldable edge is required.

The Core console allows cutting with the N₂/N₂ process at all amperages.

The Vented Water Injection or OptiMix consoles are required to use argon as the marking gas or water as the shield.

The OptiMix console is required to use H₂-Ar-N₂ mixtures for the plasma gas.

Some gas combinations will produce cut edge faces that will require abrasive grinding to allow welding on the edge.