SPIRIT® II SERIES PLASMA CUTTING SYSTEMS

MAKE THE CUT

LINCOLN® ELECTRIC

Spirit II 400 Plasma Cutting Systems
left: with manual gas console
right: with automatic gas console

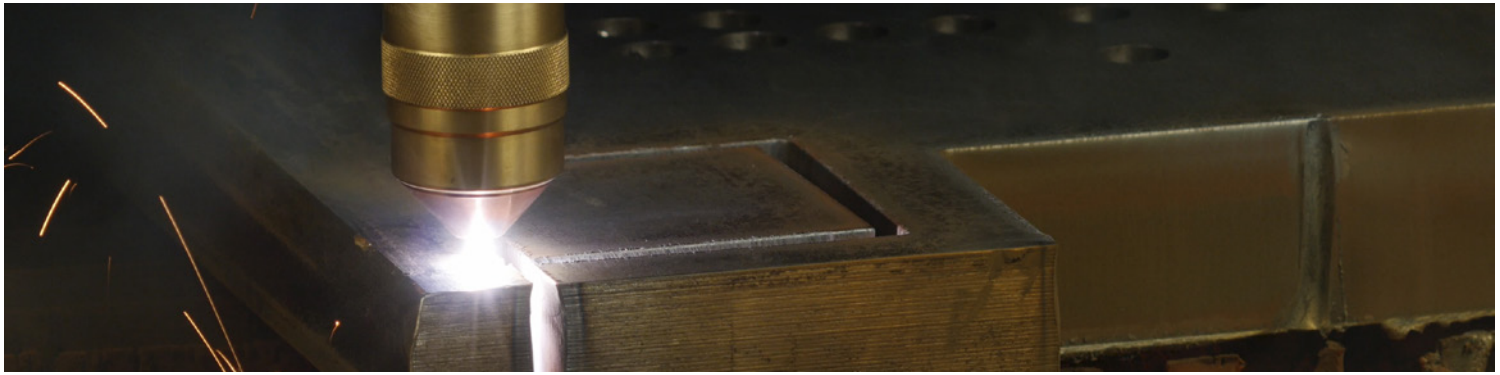
Make the Cut
with Quality and Productivity

The Spirit II with FineLine® High Definition Plasma Cutting Technology delivers the best cut quality in the industry. Our combination of patented processes, torch and consumable design ensures a precise gas flow that creates a consistent shape in the plasma arc.

The Spirit II incorporates longer-lasting consumables – especially the electrode and nozzle, the two components that are subject to the most frequent changeouts in the typical cutting system. The design of the Spirit II high efficiency consumables also reduces plasma gas consumption up to 78%, which improves overall gas savings by as much as 48 percent.

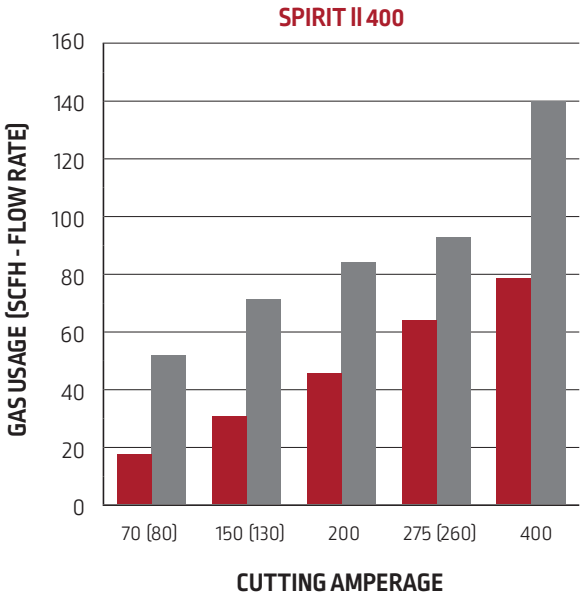
It all adds up to reduced operational costs, improved production time, and ease of operation – even for the operator with less experience or expertise.

If high quality and optimal productivity are among the primary targets in your cutting operation, tap into the spirit of success. Make the cut with Spirit II.



GAS USE COMPARISON

- Lincoln Electric® 400 Amp
- Hypertherm® 400 Amp (as published)



Quality and Durability

We Maximize Cut Quality

In industries where every millimeter counts, we add an extra degree of precision and quality to your cut. Our advanced torch technology and consumable design shapes the plasma arc to the optimal configuration and enables better cutting through metal with less edge bevel and virtually no dross. Additionally, our torch does not vent like other competitive torches; thereby, saving on gas usage. The result is a 2-degree or less edge bevel, which outperforms the edge bevel created by competitive systems, depending on operating amperage and material type.

We Go The Distance

Our patented Endura™ copper electrode lasts anywhere up to 30 percent longer than the competitor's, depending on operating amperage and/or material type. EnduraX® silver electrodes are designed to last up to 3 times longer than standard copper electrode, depending on the same variables.

We Stand Behind It All

When we say the Spirit II will outperform and outlast any competitive system, it's more than just words. We're confident enough about that claim to offer a three-year warranty on the system. Competing companies will give you two years. We go one better.

Processes »
Plasma Cutting, Marking

Applications »
General Fabrication, Automotive, Shipbuilding, Production

Output »
DC

Input »
3 PHASE, 50/60 Hz

Product Number »
- Spirit II – see page 6
- Spirit II with INOVA® – see page 7

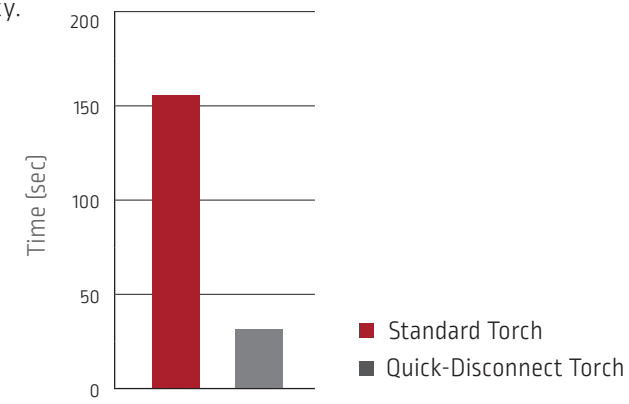
UltraSharp® Hole Cutting Technology

Superior bolt-hole quality can be easily achieved with patent-pending UltraSharp® hole cutting technology. 3/4:1 bolt-hole cutting technology in mild steel eliminates the need for drilling. Automatic configuration of the cutting parameters reduces the need for operator intervention. When UltraSharp technology is integrated with Spirit II plasma power source the result is superior hole cylindricity and hole repeatability.

- 3/4:1 bolt-holes in mild steel from 1/4 in. (6 mm) to 1 in. (25 mm)
- 1:1 bolt-holes in mild steel from 1/8 in. (3 mm) to 1 in. (25 mm)
- 1:1 bolt-holes in stainless steel for 3/16 in. (5 mm) and 1/4 in. (6 mm)

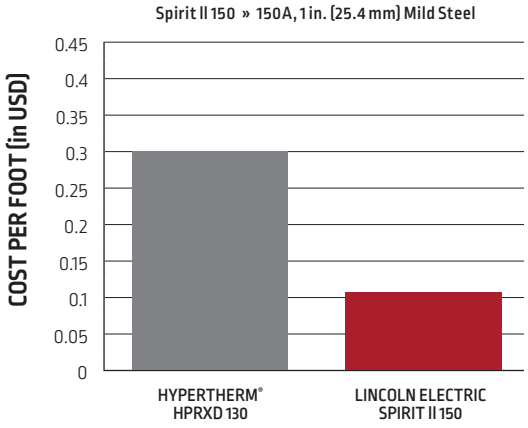
Quick-Disconnect Torch

The quick-disconnect torch head enables quick and easy changeover of consumables which reduces machine downtime and improves productivity. The patented advanced plasma torch technology allows for consistent cuts and optimized gas flow resulting in reduced operating costs.

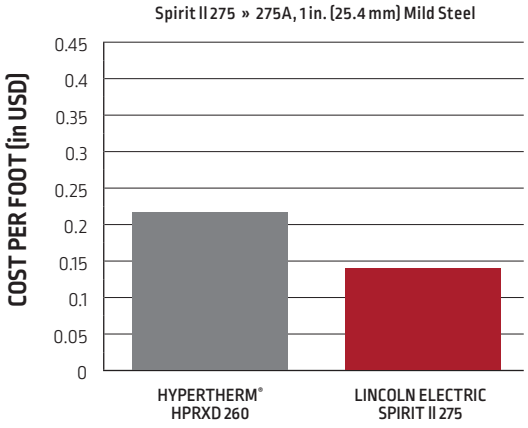


Consumable Change Time Study

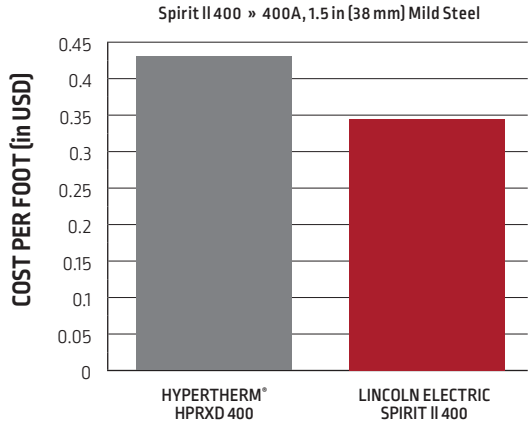
PERFORMANCE COMPARISON - Operating Costs



63% Savings with Spirit II 150



35% Savings with Spirit II 275



15% Savings with Spirit II 400

***Post-process cleaning was performed to remove dross.**

PRODUCT SPECIFICATIONS

Product Name	Product Number		Voltage	Rated Output[1] Current/Duty Cycle	Mild Steel Production Capacity, in (mm)	Mild Steel Max. Thickness, in (mm) (edge start w/dross)	Gas Supply: Plasma/ Shield/Marking	H x W x D inches (mm)	Net Wt. lbs. (kg)
	Automatic	Manual							
Spirit II 150	BK1111-000000	BK1111-000010	208	150A DC @ 100%	1.25 (32.0)	1.5 (38.0)	O_2 / O_2 / Ar O_2 / Air / Ar Air / Air / Ar Air /N_2 / Ar H17[2] / N_2 / Ar	38.4 x 29.0 x 43.2 (975 x 737 x 1097)	953 (432)
	BK1111-000001	BK1111-000011	220						
	BK1111-000002	BK1111-000012	240						
	BK1111-000003/ 000004 (CCC)	BK1111-000013/ 000014 (CCC)	380						
	BK1111-000005	BK1111-000015	400						
	BK1111-000006	BK1111-000016	415						
	BK1111-000007	BK1111-000017	440						
	BK1111-000008	BK1111-000018	480						
	BK1111-000009	BK1111-000019	600						
Spirit II 275	BK1111-000020	BK1111-000030	208	275A DC @ 100%	1.5 (38.0)	2.5 (65.0)		38.4 x 29.0 x 43.2 (975 x 737 x 1097)	1270 (576)
	BK1111-000021	BK1111-000031	220						
	BK1111-000022	BK1111-000032	240						
	BK1111-000023/ 000024 (CCC)	BK1111-000033/ 000034 (CCC)	380						
	BK1111-000025	BK1111-000035	400						
	BK1111-000026	BK1111-000036	415						
	BK1111-000027	BK1111-000037	440						
	BK1111-000028	BK1111-000038	480						
	BK1111-000029	BK1111-000039	600						
Spirit II 400	BK1111-000043/ 000044 (CCC)	BK1111-000053/ 000054 (CCC)	380	400A DC @ 100%	2 (50.0)	3 (75.0)		39.9 x 34.2 x 49.5 (1013 x 869 x 1257)	1922 (872)
	BK1111-000045	BK1111-000055	400						
	BK1111-000046	BK1111-000056	415						
	BK1111-000047	BK1111-000057	440						
	BK1111-000048	BK1111-000058	480						
	BK1111-000049	BK1111-000059	600						

[1]@ 104°F (40°C). [2]H17 = 50% N_2, 32.5% Ar, 17.5% H_2.

Burny® Shape Cutting Controllers with Integrated Spirit II Console

PRODUCT SPECIFICATIONS

Product Name	Product Number		Voltage	Rated Output[1] Current/Duty Cycle	Mild Steel Production Capacity, in (mm)	Mild Steel Max. Thickness, in (mm) (edge start w/dross)	Gas Supply: Plasma/ Shield/Marking	H x W x D inches (mm)	Net Wt. lbs. (kg)
	Automatic	Manual							
Spirit II 150 with built-in INOVA	BK1111-000100	BK1111-000110	208	150A DC @ 100%	1.25 (32.0)	1.5 (38.0)		38.4 x 29.0 x 43.2 (9.75 x 737 x 1097)	953 (432)
	BK1111-000101	BK1111-000111	220						
	BK1111-000102	BK1111-000112	240						
	BK1111-000103/ 000104 (CCC)	BK1111-000113/ 000114 (CCC)	380						
	BK1111-000105	BK1111-000115	400						
	BK1111-000106	BK1111-000116	415						
	BK1111-000107	BK1111-000117	440						
	BK1111-000108	BK1111-000118	480						
	BK1111-000109	BK1111-000119	600						
Spirit II 275 with built-in INOVA	BK1111-000120	BK1111-000130	208	275A DC @ 100%	1.5 (38.0)	2.5 (65.0)	O2/O2/Ar O2/Air/Ar Air/Air/Ar Air/N2/Ar H17[2]/N2/Ar	38.4 x 29.0 x 43.2 (975 x 737 x 1097)	1270 (576)
	BK1111-000121	BK1111-000131	220						
	BK1111-000122	BK1111-000132	240						
	BK1111-000123/ 000124 (CCC)	BK1111-000133/ 000134 (CCC)	380						
	BK1111-000125	BK1111-000135	400						
	BK1111-000126	BK1111-000136	415						
	BK1111-000127	BK1111-000137	440						
	BK1111-000128	BK1111-000138	480						
	BK1111-000129	BK1111-000139	600						
Spirit II 400 with built-in INOVA	BK1111-000143/ 000144 (CCC)	BK1111-000153/ 000054 (CCC)	380	400A DC @ 100%	2 (50.0)	3 (75.0)		39.9 x 34.2 x 49.5 (1013 x 869 x 1257)	1922 (872)
	BK1111-000145	BK1111-000155	400						
	BK1111-000146	BK1111-000156	415						
	BK1111-000147	BK1111-000157	440						
	BK1111-000148	BK1111-000158	480						
	BK1111-000149	BK1111-000159	600						

[1]@ 104°F (40°C). [2]H17 = 50% N_2, 32.5% Ar, 17.5% H_2.

INOVA® Precision Torch Height Control

The INOVA® torch height control system is second to none in precision and efficiency. Its simple user interface enables you to program more functions, set tighter parameters and achieve better part cut quality. With the ability to track material within ± 0.4 arc volts, the INOVA system allows on the fly adjustments, saving both time and money by maximizing throughput and extending consumable life.

Hafnium Optimizing Technology (Hf OT®)

This proprietary technology maximizes consumable life while ensuring superior cut quality. Hf OT™ begins with the design of the torch and consumables. The components are designed to provide proper arc formation, constriction, and centering. Hf OT™ includes a breakthrough method for minimizing consumable wear during start up and shut down of the system, where a majority of the consumable wear occurs. This is done by uniquely controlling the relationship between the arc current and plasma gas. Hf OT™ results in superior cut quality and extraordinary consumable life, which means more production from a single set of consumables and therefore lower operating cost.

Publication E15.17B | Issue Date 09/17

www.lincolnelectric.com

The Lincoln Electric Company
22801 St. Clair Avenue
Cleveland, OH 44117-1199 U.S.A.