



 **KALIBURN**
PLASMA CUTTING INNOVATION

When others fall short, the Spirit lives on.

 **Spirit 275a**



PLASMA CUTTING INNOVATION.

KALIBURN has been providing plasma cutting innovation for more than 22 years.

While technologies have been updated, and equipment needs have changed throughout our history, the "spirit" of the products and the quality of services KALIBURN provides have never been compromised.

The KALIBURN Spirit275a continues our legendary tradition of unprecedented quality, service and innovation for plasma cutting tools.



INTRODUCING...

KALIBURN Spirit275a

KALIBURN Spirit275a offers expanded thickness capability and optimized cutting speeds in a high amperage precision, high definition plasma cutting and marking system. Maximum productivity coupled with unparalleled consumable life make Spirit275a the system of choice for production shops seeking the utmost in plasma cutting performance.

THE "a" IS FOR AUTOMATIC...

The KALIBURN Spirit275a automatically sets process parameters which equates to exceptional ease of operation. Combining convenience with the ultimate in cut quality and the highest processing speed, the Spirit275a truly sets the standard in precision plasma cutting.

This 275 amp system offers fully automated process control for production cutting of most metals to 1-1/4" (32.0 mm) thick and has a maximum capacity of 2" (50.0 mm). With the system's automatic gas console (AGC) you simply select the material type and thickness or you let your computer's serial port transmit the cutting parameters.

The rest is automatic.

THE LEGEND IS TRUE...

True precision. True quality. The KALIBURN Spirit275a provides true precision high definition plasma cut edge quality. It delivers virtually dross free cuts with minimal face bevels. †

CLEANER, FASTER CUTS...

The KALIBURN Spirit275a is available with the **optional** INOVA Torch Height Control system. Also, a pneumatic safety switch can be added to protect the torch from collision damage.



† Those considering this process should be aware of cut edge squareness criteria and how it relates to consumable lifetime. KALIBURN continues to describe the precision plasma process in traditional terms of minimal cut face bevel.



The KALIBURN Spirit275a incorporates H_fOT™, Hafnium Optimizing Technology. The new process maximizes the lifetime of consumables and substantially reduces operating costs as shown below:

CONSUMABLE COST SAVINGS PER YEAR FOR A TYPICAL PART

- Total inches of cut per part: 40
- Average inches per start: 5
- Number of pierces per part: 8
- Single shift operation

APPROXIMATE CONSUMABLE COST SAVINGS PER YEAR / For Carbon Steel

	.25" (6.0 mm) @ 100 amps	.375" (10.0 mm) @ 150 amps	.5" (12.0 mm) @ 200 amps	1" (25.0 mm) @ 275 amps
Spirit275a	\$7,100	\$5,700	\$16,100	\$8,000

The Spirit275a is one of three fully automatic systems in the KALIBURN Spirit family. Other Spirit systems offer identical cut quality but each has a unique amperage range and corresponding thickness capacity.

KALIBURN also offers three similar machines in a less automated configuration. Spirit275m type systems offer identical cut quality but require manual process parameter setting.





SPECIFICATIONS

Spirit275a

Spirit Torch

- 275 amps @ 100% duty cycle
- Dual gas
- Liquid cooled
- Built-in initial height sensing capability
- Extended life, low cost consumables
- Cutting and marking with the same consumables

Spirit Power Supply

- Rated 275 amperes DC @ 100% duty cycle
-  and  approval available
- Advanced technology, high efficiency chopper-stabilized current output
- Dual 600 ampere IGBT chopper transistor for high reliability
- Current overshoot reduction circuitry for longer electrode and nozzle life
- Very low transferred arc current sensing for higher starting height and longer nozzle shield life
- Fast switch transferred arc for extended nozzle life
- 70 GPH recirculating torch coolant system
- 0.4 amps peak to peak output current ripple at 275 amps
- 3-phase input, 53 KVA, 208v (147a), 230v (133a), 380v (81a), 415v (74a), 460v (67a), 575v (53a)

Spirit Automatic Gas Console

- Sets all plasma torch parameters by material type and thickness
- Displays torch parts for selected material and thickness
- Communicates with optional INOVA Torch Height Control and the x-y cutting table control via RS-422
- Performs self diagnostics
- Sets optional INOVA Torch Height Control automatically to proper pierce height, cutting height and arc voltage
- Tracks pierces, pierce errors and type of errors for the last six electrodes
- Extends electrode life through a patented process
- Software is updateable by 3.5" floppy

Material	Thickness		Current (amps)	Speed		
	(in)	(mm)		(IPM)	(m/min)**	
MILD STEEL O2 PLASMA O2/AIR SHIELD	.036	1.0	30	105	2.616	
	.060	1.5		78	2.021	
	.105	2.5		55	1.456	
		.125	3.0	50	180	4.660
		.188	5.0	70	130	3.265
		.250	6.0	100	150	3.952
		.375	10.0		100	2.404
		.500	12.0		65	1.850
		.625	16.0	150	70	1.762
		.750	20.0	200	75	1.811
		1.00	25.0	275	65	1.691
		1.25	32.0		45	1.122
	1.50*	38.0*	25		.643	
	1.75*	45.0*	20		.496	
	2.00*	50.0*		15	.396	
STAINLESS STEEL AIR PLASMA AIR/N2 SHIELD	.036	1.0	30	200	4.857	
	.060	1.5		125	3.259	
		.105	2.5	50	75	2.082
		.120	3.0		65	1.684
		.188	5.0	70	100	2.447
		.250	6.0	100	100	2.596
		.375	10.0		80	1.935
		.500	12.0	200	110	3.021
		.625	16.0		75	1.889
		.750	20.0	275	80	1.938
	1.00	25.0	55		1.437	
ALUMINUM AIR PLASMA AIR/N2 SHIELD	.040	1.0	30	150	3.886	
	.063	1.5		90	2.520	
		.050	1.5	50	180	3.868
		.080	1.5		90	3.868
		.188	5.0	70	80	1.921
		.250	6.0	100	105	2.709
		.375	10.0		90	2.208
		.500	12.0	200	70	1.891
		.250	6.0		190	4.954
		.500	12.0		110	2.993
	1.00	25.0		35	.937	

* Requires edge start or moving pierce.

** Approximate Speed.

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