



# ITT

## KALIBURN

### KALIBURN Spirit400a 400 amp High Current Density Plasma Cutting System



## Spirit400a

#### Another KALIBURN first!

The KALIBURN Spirit400a plasma cutting system represents a major breakthrough in precision high current density plasma cutting and marking. Its 400 amp output provides the greatest thickness capacity and highest processing speeds in the industry while incorporating the exceptional consumable life common to all Spirit systems. This system truly offers the best of everything: quality, speed, capacity, and economy.

The Spirit400a system is capable of cutting most metals to 2" (50.0mm) and has a maximum capacity of 3" (75.0mm).

**The "a" is for automatic.** The KALIBURN Spirit400a 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 Spirit400a truly sets the standard in precision plasma cutting.

Mild Steel Production Capacity	Max. Thickness (Edge Start, with dross)
2" (50.0mm)	3" (75.0mm)

With the system's automatic gas console (AGC), you simply select the material type and thickness or let your computer's serial port transmit the cutting parameters. The rest is automatic, and especially easy when interfaced to a Burny 10LCD+ or Burny Phantom Control.

The KALIBURN Spirit400a is a precision high current density plasma that delivers incomparable cut edge quality with bevels of 2° or less. The Spirit400a system is one of four fully automated systems in the KALIBURN Spirit family. Other Spirit systems offer identical cut quality but each has a unique amperage range and corresponding thickness capacity.

The KALIBURN Spirit400a 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.



KALIBURN H<sub>f</sub>OT™ (Hafnium Optimizing Technology) is proprietary technology that maximizes consumable life while ensuring superior cut quality. H<sub>f</sub>OT™ begins with the design of the torch and consumables. The components are designed to provide proper arc formation, constriction, and centering. H<sub>f</sub>OT™ includes a breakthrough method for starting and stopping the plasma arc, which is where the majority of the consumable wear occurs. H<sub>f</sub>OT™ minimizes consumable wear during the start up and shut down by uniquely and precisely controlling the relationship between the arc current and plasma gas. H<sub>f</sub>OT™ results in superior cut quality, extraordinary consumable life, and low operating cost.

*Engineered for life*



## SPECIFICATIONS

RATED 400 amps DC @ 100% duty cycle (@ 104° F / 40° C)

### 3 PHASE INPUT VOLTAGE & AMPERAGE

208V	60Hz	276A
230V	60Hz	250A
380V	50/60Hz	151A
415V	50/60Hz	138A
460V	60Hz	125A
575V	60Hz	100A

### DIMENSIONS

#### POWER SUPPLY (including AGC)

WEIGHT	2048lb (929kg)
HEIGHT	49.8in (1266mm)
WIDTH	34in (864mm)
DEPTH	51.6in (1311mm)

#### COOLING SYSTEM

WEIGHT	110lb (50kg)
HEIGHT	36in (914mm)
WIDTH	23in (584mm)
DEPTH	15.8in (401mm)

### GAS SUPPLY

#### PLASMA GAS

O <sub>2</sub>	AIR	H17*	N <sub>2</sub>
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#### SHIELD GAS

AIR	O <sub>2</sub>	N <sub>2</sub>
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\* H17 = 50% N<sub>2</sub>, 32.5% Ar, 17.5% H<sub>2</sub>

## FEATURES

- High current density cuts are virtually dross free and square (2° or less bevel)
- Cutting and marking with the same consumables
- Sets all plasma torch parameters by material type and thickness
- Displays torch parts for selected material and thickness
- Dual 275 amp choppers with advanced technology, high efficiency chopper-stabilized current output
- 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
- Performs self diagnostics
- Tracks pierces, pierce errors and type of errors for the last six electrodes
- Extends electrode life through a patented process
- Communicates with optional INOVA torch Height Control and the x-y cutting table control via RS-422
- Sets optional INOVA Torch Height Control automatically to proper pierce height, cutting height and arc voltage



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	AMP	Thickness (in)	Speed (ipm)	Thickness (mm)	Speed (m/min)	GAS
MILD STEEL	30	0.036	105	1.0	2.615	O <sub>2</sub> plasma O <sub>2</sub> shield
		0.075	65	2.0	1.615	
		0.135	40	3.0	1.285	
	50	0.075	200	2.5	4.885	O <sub>2</sub> plasma Air shield
		0.125	180	3.0	4.660	
		1/4	75	6.0	2.075	
	70	0.125	190	3.0	4.995	
		1/4	120	5.0	3.265	
		3/8	75	6.0	3.105	
	100	1/4	150	6.0	3.950	
		1/2	65	12.0	1.850	
		3/4	35	20.0	0.800	
150	1/4	165	6.0	4.305		
	1/2	90	12.0	2.485		
	1	40	25.0	1.040		
200	1/4	230	6.0	6.100		
	1/2	120	12.0	3.160		
	3/4	75	20.0	1.810		
275	1	50	25.0	1.310		
	1/2	125	12.0	3.290		
	3/4	90	20.0	2.190		
400	1	65	25.0	1.690		
	1 1/4	45	32.0	1.120		
	1/2	160	12.0	4.205		
STAINLESS STEEL	30	0.036	200	1.0	4.855	AIR plasma AIR shield
		0.075	90	1.5	3.260	
	50	0.075	105	2.0	2.565	AIR plasma N <sub>2</sub> shield
		0.120	65	3.0	1.685	
	1/4	40	6.0	1.075		
	70	0.135	120	3.0	3.210	
		3/8	50	6.0	2.050	
	100	3/8	80	10.0	1.935	
		1/2	55	12.0	1.540	
	150	1/4	150	6.0	3.910	
		1/2	85	12.0	2.330	
	200	3/4	45	20.0	1.030	
1/4		200	6.0	5.220		
275	5/8	75	16.0	1.890		
	1	40	25.0	1.050		
400	1/2	120	12.0	3.220		
	3/4	80	20.0	1.940		
70	1	55	25.0	1.435		
	1/2	130	12.0	3.415		
100	1	65	25.0	1.690		
	1 1/2	35	38.0	0.895		
150	2*	15	50.0*	0.410		
	3/16	80	5.0	2.030		
200	1/4	100	6.0	2.625		
	1/2	60	12.0	1.610		
260	3/4	40	20.0	0.940		
	3/8	80	10.0	2.010		
400	5/8	60	16.0	1.515		
	1	35	25.0	0.915		
70	3/8	85	10.0	2.140		
	3/4	55	20.0	1.315		
100	1	33	25.0	0.875		
	1/2	105	12.0	2.750		
150	1	50	25.0	1.310		
	1 1/2	30	38.0	0.765		
200	2*	18	50.0*	0.470		
	0.080	90	2.0	2.360		
ALUMINUM	50	0.080	250	2.0	6.400	AIR plasma N <sub>2</sub> shield
		3/16	80	5.0	1.920	
	1/2	30	12.0	0.820		
	100	1/4	105	6.0	2.710	
		3/8	90	10.0	2.210	
	150	1/2	70	12.0	1.890	
		1/4	145	6.0	3.770	
	200	1/2	90	12.0	2.430	
		3/4	45	20.0	0.990	
	275	1/4	190	6.0	4.955	
		1/2	110	12.0	2.995	
	400	3/4	65	20.0	1.575	
3/8		160	10.0	3.930		
70	1/2	125	12.0	3.375		
	3/4	85	20.0	2.055		
100	1/2	150	12.0	3.950		
	1	75	25.0	1.945		
150	1 1/2	35	38.0	0.895		

\*Requires edge start or moving pierce

**3-YEAR POWER SUPPLY WARRANTY**