

The Ultima[®] 150 Plasma welding system has many advantages over traditional automated TIG welding including: **increased productivity, consistent arc starting, improved process control and reduced electrical emission interference.**

This unique plasma welding system is self contained in a small package with a 150 amp power

supply, coolant recirculator and control console. Our design reduces floor space and simplifies installation, making the initial price competitive with automated TIG systems while its increased productivity and repeatable performance allow it to pay for itself in a shorter period of time.

FEATURES AND BENEFITS OF THE ULTIMA 150

- 0.5-150 Amp current range - providing quality performance on a wide variety of applications
- Smooth DC arc - repetitive, high quality welds
- Pilot arc - repeatable arc starting reducing defects and rework
- Multiple Voltage Input - 200-460 VAC, 1 or 3 phase, 50 or 60 hz (575 VAC with optional module)
- Smart Logic - circuit protects unit from damage if improper voltage is applied
- Current Limiter - limits power source output to torch capability to avoid torch damage
- Preview Set Current - eliminates costly test set-ups/displays actual current/voltage
- Protection devices:
 - Coolant dionizer and ionized coolant protection
 - Coolant flow protection/interlock
 - Coolant temperature protection/interlock
 - Console temperature overload detection/interlock
- Simple interface - automated or manual control
- Can utilize a number of current Thermal Dynamics torches



The Ultima[®] 150 system (1-155X-XX) is shipped with an Ultima 150 unit and the appropriate torch with a torch spare parts kit. The Ultima 150 (unit only) is shipped with a torch quick disconnect kit, but no torch or leads.

Torch (Rating)	System Description	w/12.5 ft. Torch and Leads	w/25 ft. Torch and Leads
2A (75 amps)	PWH-2A, 70 degree	1-1551-21	1-1552-21
	PWH-2A, 90 degree	1-1551-22	1-1552-22
	PWH-2A, 180 degree	1-1551-23	1-1552-23
	PWM-2A, 180 degree	1-1553-23	1-1554-23
3A (150 amps)	PWH-3A, 70 degree	1-1551-31	1-1552-31
	PWH-3A, 90 degree	1-1551-32	1-1552-32
	PWH-3A, 180 degree	1-1551-33	1-1552-33
	PWM-3A, 180 degree	1-1553-33	1-1554-33
4A (200 amps)	PWH-4A, 70 degree	1-1551-41	1-1552-41
	PWH-4A, 90 degree	1-1551-42	1-1552-42
	PWH-4A, 180 degree	1-1551-43	1-1552-43
	PWH-4A1, 180 degree	1-1551-53	1-1552-53
	PWM-4A, 180 degree	1-1553-43	1-1554-43
	PWM-4A1, 180 degree	1-1553-53	1-1554-53

- PWH designates a torch with a molded handle.
- PWM designates a torch with rack and pinion.
- Torch amperage rating based on minimum electrode set back.

Ultima 150 Unit Only (Includes Quick Disconnect Assembly)	3-2770
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575 VAC Transformer Module (Optional module to convert standard product to 575 volt operation)	7-3315
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NOTES: Pressure regulators are required to operate system. See below for ordering information.

The controlling of the **on/off** must be done with a remote control device. This can be customer supplied or selected from the remote control options below.

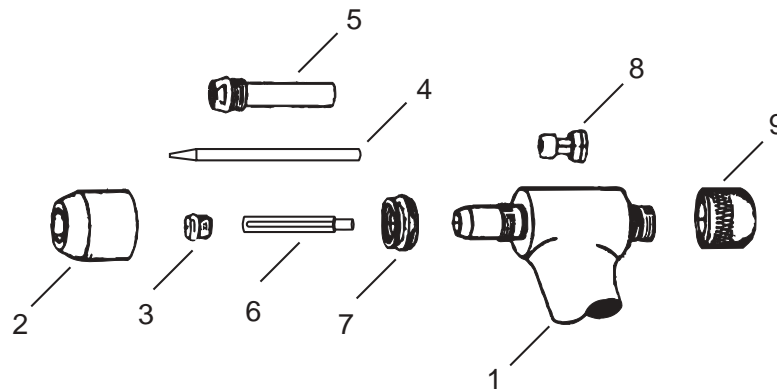
Quick Disconnect Kit (Allows existing torches to be converted for use with Ultima 150)	5-2990
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Regulators	
• Argon	9-2722
• Argon/Hydrogen	9-3053

Remote Controls	
• Foot Control	7-3080
• Hand Pendant	10-2005*
• Remote Interface Cable (10 ft.)	9-4063
*requires 7-3316 adapter	

Weld Process Controller	
• WC-1	600279
• Remote Hand Pendant (25 ft.)	600280
• Cable Assembly (required)	9-4129

Got Power...?



TORCH PARTS

ITEM NO.	PART DESCRIPTION	2A TORCH	SPARE PARTS KIT 5-2984	3A TORCH	SPARE PARTS KIT 5-2985	4A TORCH	SPARE PARTS KIT 5-2986
1	Torch Head Assembly	8-2027 (70°) 8-2028 (90°) 8-2097 (180° offset)		8-3030 (70°) 8-3031 (90°) 8-3032 (180° offset)		8-4014 (70°) 8-4015 (90°) 8-4016 (180° offset) 8-4054 (180° inline)	
2	Shield Cup	8-3236 (use w/ext. tip) 8-2071 (use w/std. tip)	2	8-3040	1	8-4088	1
3	Tip	8-2023 (.045) 35A-std 8-2024 (.062) 55A-std 8-2025 (.081) 75A-std 8-2079 (.031) 15A-lg 8-2080 (.045) 25A-lg 8-2082 (.062) 35A-lg 8-2083 (.081) 50A-lg	5 5	9-1788 (.031) 35A-lg 9-1789 (.046) 50A-lg 9-1790 (.062) 75A-lg 9-1791 (.081) 100A-lg 9-1811 (-.093) 130A-lg	5 5 5	9-1890 (.062) 100A-lg 9-1891 (.093) 125A-lg 9-1892 (.125) 150A-lg*	5 5 5
4	Electrode	8-2033 (.093) std 8-2006 (.093) ext. 8-2044 (.040) std. 8-2046 (.040) ext.		8-2007 (.093) std. 9-1775 (.093) ext.	2	9-1827 (.187) std. 9-1834 (.187) ext.	2
5	Liner	N/A		N/A		8-4011	2
6	Gas Distributor (insulating sleeve)	8-2040 (.093-electrode) 8-2042 (.040-electrode)	1	9-2240	1	9-2204	1
7	Gas Diffuser	N/A		8-3059		8-4087	
8	Collet Assembly	8-2039 (.093-electrode) 8-2041 (.040-electrode)		9-1780	1	9-1876	
9	Back Cap	8-2032 (std-electrode) 8-2030 (ext-electrode)		9-1779 (std-electrode) 9-1803 (ext-electrode)		8-4158 (std-electrode) 9-1877 (ext-electrode)	
N/S	Collar	N/A		N/A		8-4024	
N/S	O-ring (liner)	N/A		N/A		8-0560	
N/S	O-ring (internal)	N/A		N/A		8-0528	
N/S	O-ring (back-cap)	8-2035		8-0527		8-0530	
N/S	Gasket (shield cup)	8-2036		8-3057		8-4069	
N/S	Gage/Wrench Assy	8-2021	1	9-1810	1	9-1873	1
N/S	Lubricant	8-4025	1	8-4025	1	8-4025	1
N/S	Tool Box	8-3141	1	8-3141	1	8-3141	1

NOTE: The use of extended electrode requires an extended back cap.
 Tip ratings @ minimum electrode setback.
 *Tip maximum current rating not to exceed the maximum output of Ultima-150

TORCH SPECIFICATIONS

	Type	Part No.	Torch Lead Length	Current Rating	Coolant Requirements	Torch Dimensions					
						A	B	C		D	E
	PWH-2A 70°	2-2100 (H)	12.5 ft.	75 Amps (DCSP)	2,000 BTU/hr (504 K/Cal/hr) 1/4 gpm coolant flow @ 50 PSI (0.9 lpm @ 3.7 kg/cm ²)	7-15/16"	1-11/16"	5/8"		7/8"	
		2-2104 (H)	25 ft.			(202 mm)	(43 mm)	(16 mm)		(22 mm)	
	PWH-2A 90°	2-2101 (H)	12.5 ft.			7-3/4"	1-11/16"	5/8"		7/8"	
		2-2105 (H)	25 ft.			(196 mm)	(43 mm)	(16 mm)		(22 mm)	
	PWH-3A 70°	2-2110 (H)	12.5 ft.	150 Amps (DCSP)	6,000 BTU/hr (1513 K/Cal/hr) 1/3 gpm coolant flow @ 50 PSI (1.25 lpm @ 3.7 kg/cm ²)	8-3/4"	2-5/8"	7/8"		1-1/16"	
		2-2114 (H)	25 ft.			(222 mm)	(67 mm)	(22 mm)		(27 mm)	
	PWH-3A 90°	2-2111 (H)	12.5 ft.			8-1/2"	2-5/8"	7/8"		1-1/16"	
		2-2115 (H)	25 ft.			(216 mm)	(67 mm)	(22 mm)		(27 mm)	
	PWH-4A 70°	2-2120 (H)	12.5 ft.	200 Amps (DCSP)	8,000 BTU/hr (2017 K/Cal/hr) 1/2 gpm coolant flow @ 50 PSI (1.9 lpm @ 3.7 kg/cm ²)	12-1/2"	3-3/16"	1-1/4"		1-3/8"	
		2-2125 (H)	25 ft.			(318 mm)	(81 mm)	(32 mm)		(35 mm)	
	PWH-4A 90°	2-2119 (H)	12.5 ft.			12-1/4"	3-3/16"	1-1/4"		1-3/8"	
		2-2126 (H)	25 ft.			(311 mm)	(81 mm)	(32 mm)		(35 mm)	
	PWM-4A 180° Offset	2-2121 (H)	12.5 ft.	200 Amps (DCSP)	8,000 BTU/hr (2017 K/Cal/hr) 1/2 gpm coolant flow @ 50 PSI (1.9 lpm @ 3.7 kg/cm ²)	18"	1-3/4"	Min.	Max.	1-3/8"	1-1/4"
		2-2122 (M)	25 ft.			(457 mm)	(44 mm)	8-1/4"	16"	(35 mm)	(35 mm)
	PWM-4A1 180° Inline	2-2127 (H)	12.5 ft.			21"	1-3/4"	Min.	Max.	1-3/8"	1-1/4"
		2-2128 (M)	25 ft.			(53 mm)	(44 mm)	11-1/4"	19"	(35 mm)	(35 mm)

NOTE: All torches listed incorporate a quick disconnect connector specifically for operation with the Ultima 150.

(H) designates torch with molded handle

(M) designates torch with rack and pinion assembly

Input Voltages	200-460 Volt Single/Three Phase						
	200 VAC	208 VAC	230 VAC	380 VAC	415 VAC	460 VAC	
Power (KVA)	1 ph	8					
	3 ph	6					
Current (Amps)	1 ph	39	37	34	24	22	20
	3 ph	21	20	19	12	12	11

Rated Output	- Amps	- 100/150A	Contractor Control	- Remote Input
	- Volts	- 18/25 V	Current Control	- Remote or Panel
	- Duty Cycle	- 100/60 %	Analog Control	- 0-10 Volts DC Input
Output Ranges	- Low	- .5-15 A	Dimensions	Height: 18 in/457 mm
	- High	- 5-150A		Width: 15 in/381 mm
Load Volts	- 12-25 V			Length: 28.5 in/724 mm
OCV	- 60 V DC			Weight: 130 lbs/59 kg
Input Hz	- 50/60 Hz		Shipping Weight	- 154 lbs/72 kg
Flow Meters	- Plasma	- .5-3.0 SCFH (.25-1.5 lpm)		
	- Shield	- 5-30 SCFH (2.5-15 Lpm)		

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