

Auto Deltaweld™ 500 Basic

Automated MIG
Welding Systems



Quick Specs

General Manufacturing

Heavy industrial manufacturing
General fabrication
Structural steel fabrication
Transportation
Sheet metal fabrication
Light-gauge tube and sheet

Processes

MIG (GMAW)
Flux-cored (FCAW)
Metal-cored (GMAW-C)
Accu-Pulse® MIG (GMAW-P)

Auxiliary Power 115 V standard

Input Power

208/230/460 V or 575 V, three-phase, 60 Hz

Rated Output 500 A at 100% duty cycle

Output Range 30–650 A, 10–44 V

Designed for cobot integrators, Auto Deltaweld is your direct path to incorporate Miller welding technology into to your offerings.

Easy to use

Programming and operation is driven to the cobot pendant to allow for a single-point user interface.

Pulse capable

Accu-Pulse offers a more forgiving arc and compensates for variations in operator technique, providing a wider operating window.

Easy to integrate

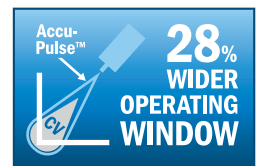
Auto Deltaweld provides both Modbus TCP and EtherNet/IP for direct communications to your cobot.



Auto Deltaweld 500 Basic with Auto Deltaweld Basic fixed wire drive.



Auto Deltaweld 500 Basic shown with user-supplied cobot.



Power source is warrantied for three years, parts and labor.
Original main power rectifier parts are warrantied for five years.



Miller Welding Automation

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MillerWelds.com



Auto Deltaweld™ 500 Basic Features



Ethernet communication receptacle allows webpage display and access for weld set up, troubleshooting, and power supply configuration

USB access for software updates, Insight access, and fault information downloading.

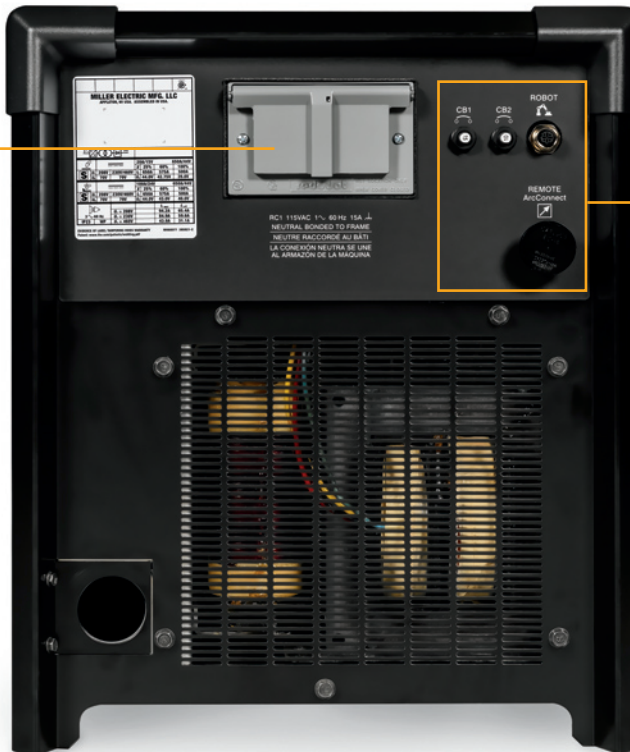


Status indicator LED lights indicate communication and connectivity.

Wind Tunnel Technology™ Internal air flow that protects electrical components and PC boards from dirt, dust, debris — greatly improving reliability.

Fan-On-Demand™ operates only when needed reducing noise, power consumption, and the amount of airborne contaminants pulled through the machine.

Standard 115-volt auxiliary power provides 15 amps of circuit-breaker-protected power.



Ethernet communication receptacle allows for both Modbus TCP and EtherNet/IP communication protocols to directly communicate with your automation system.



ArcConnect™ is a next generation communication that utilizes high speed signals to improve weld performance and allow point-of-use controls to be located at the feeder.

Auto Deltaweld™ 500 Basic Specifications (Subject to change without notice.)



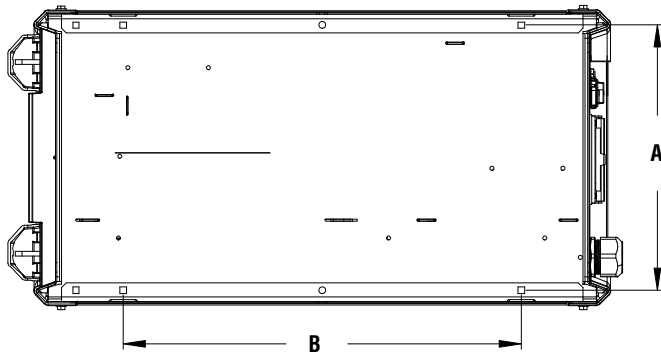
Mode	Amp/Volt Ranges	Rated Output	Amps Input at Rated Output, 60 Hz, 3-Phase						Dimensions (Includes lift eye)	Net Weight
			208 V	230 V	460 V	575 V	KVA	KW		
MIG (GMAW)	10–44 V	500 A at 39 VDC, 100% duty cycle	64.2	58.1	30.4	24.8	24.2 (24.7*)	21.7 (21.7*)	H: 18.55 in. (471 mm) W: 15.35 in. (390 mm) D: 31.65 in. (804 mm)	145 lb. (65.8 kg)
		575 A at 42.75 VDC, 60% duty cycle	80.2	73.5	38.0	30.4	30.3 (30.2*)	27.2 (27.2*)		
		650 A at 44 VDC, 25% duty cycle	94.2	84.9	43.9	34.9	35.0 (34.8*)	31.6 (31.7*)		

*KVA and KW for 575-volt model.

Certified by Canadian Standards Association to both the Canadian and U.S. Standards.

Mounting Specifications

Bottom View Power Source

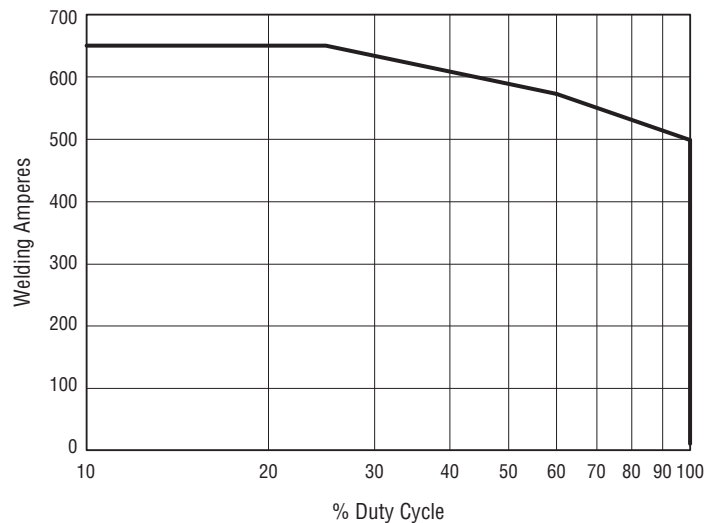


A. 14 in. (356 mm)
B. 21 in. (533 mm)

Height: 18.55 in. (471 mm)
Width: 15.35 in. (390 mm)
Depth: 31.65 in. (804 mm)

Auto Deltaweld™ 500 Basic Performance Data

Duty Cycle Chart

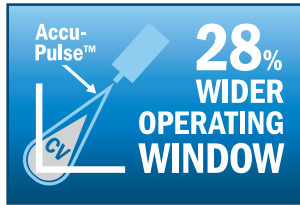


Auto Deltaweld™ 500 Basic System Processes

Take the performance of each process to the highest level

Accu-Pulse®

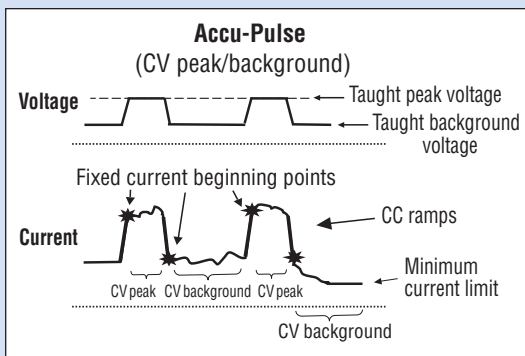
- More forgiving arc compensates for variations in operator technique
- Most adaptive arc on 16 gauge (1.6 mm) and thicker
- Designed for all weld positions



Best For	Standard Spray	Accu-Pulse	Short Circuit
Deposition	A	A	D
Gap filling	D	B	A
Low heat input	D	B	A
Out-of-position welds		A	B
Low spatter	A	A	C
Thick metals	A	A	D
Thin metals		B	A
Increased travel speed	A	A	B

HOT COLD

Ratings A, B, C, and D are relative values. An "A" rating indicates a best fit between your performance needs and process. A "blank" rating indicates that the process is not recommended for that application.



The Accu-Pulse process allows for precise control of the pulse arc. Accu-Pulse provides optimum molten puddle control and has power to increase wire feed speeds and deposition 20 to 25 percent in many applications. In most cases, slightly different ratios of gas mixtures will perform well using a similar program and adjusting arc length or the appropriate arc control for the selected process. Contact Miller for more information on less common materials and gas combinations.

Wire Drive Motor Assembly Specifications (Subject to change without notice.)



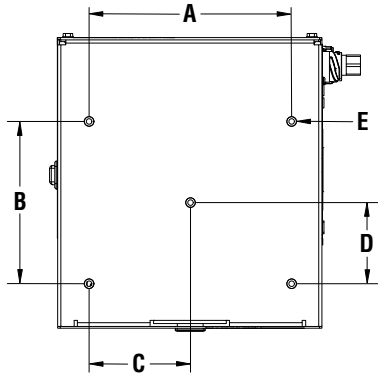
Auto Deltaweld™ Basic Fixed Wire Drive

Input Power	Welding Power Source	Input Welding Circuit Rating	Wire Feed Speed	Wire Diameter Capacity	Maximum Spool Capacity	Dimensions	Net Weight
50 VDC	Auto Deltaweld 350/500 Basic	600 A at 60% duty cycle, 113 VDC	Standard 50–780 ipm (1.3–19.8 m/min.)	.023–5/64 in. (0.6–2.0 mm)	18 in. (457 mm), 60 lb. (27 kg)	H: 9.7 in. (246 mm) W: 11.8 in. (300 mm) D: 10.8 in. (274 mm)	21.2 lb. (9.6 kg)

 Certified by Canadian Standards Association to both the Canadian and U.S. Standards.

Mounting Specifications

Bottom View Wire Drive Motor








- A. 7.5 in. (190.5 mm)
- B. 6 in. (152.4 mm)
- C. 3.75 in. (95.25 mm)
- D. 3 in. (76.2 mm)
- E. (5) 1/4"-20 threaded holes

- Height: 9.7 in. (246 mm)
- Width: 11.8 in. (300 mm)
- Depth: 10.8 in. (274 mm)

Drive Roll Kits and Guides

Select drive roll kits from chart below according to type and wire size being used. Drive roll kits include four drive rolls, necessary guides and feature an anti-wear sleeve for inlet guide.

Wire Size	V-groove for hard wire 	U-groove for soft wire or soft-shelled cored wires 	V-knurled for hard-shelled cored wires 	U-cogged for extremely soft wire or soft-shelled cored wires (i.e., hard facing types) 	U-groove for aluminum wires contains nylon guides 
.035 in. (0.9 mm)	151026	—	151052	—	265255
.035 and .045 in. (0.9 and 1.2 mm)	235336*	—	151052	—	265255
.045 in. (1.1/1.2 mm)	151027	151037**	151053	151070	265256**
.052 in. (1.3/1.4 mm)	151028	—	151054	—	—
1/16 in. (1.6 mm)	151029	151039	151055	151072	265257

*Drive roll is dual-size reversible with one .035-inch and one .045-inch groove.

**Accommodates .045- and .047-inch (3/64-inch) wire.

Nylon Wire Guides for Feeding Aluminum Wire

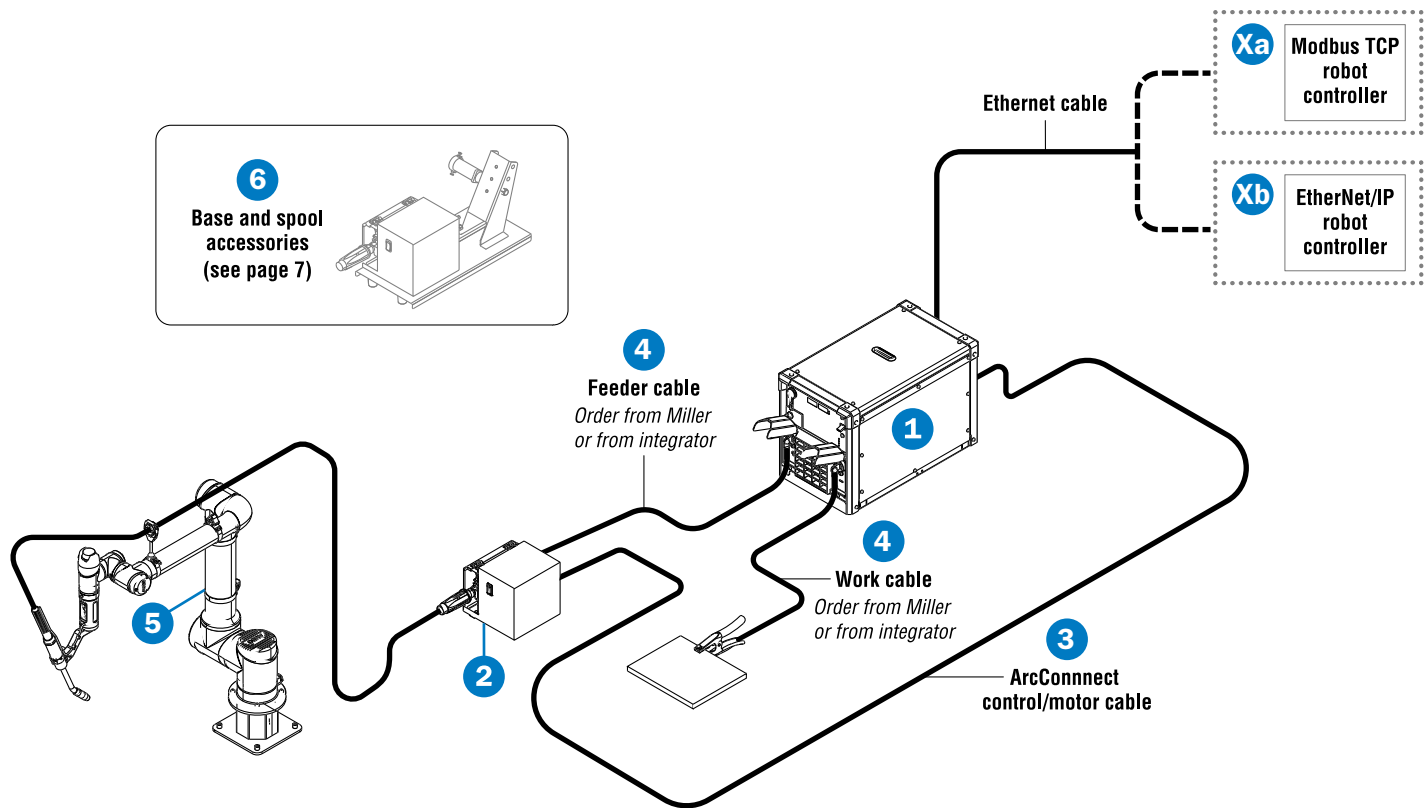
Wire Size	Inlet Guide	Intermediate Guide
.035 in. (0.9 mm)	221912	242417
.047 in. (1.2 mm)	221912	205936
1/16 in. (1.6 mm)	221912	205937

Note: U-groove drive rolls are recommended when feeding aluminum wire.

Wire Guides

Wire Size	Inlet Guide	Intermediate Guide
.023–.040 in. (0.6–1.0 mm)	221030	149518
.045–.052 in. (1.1–1.4 mm)	221030	149519
1/16–5/64 in. (1.6–2.0 mm)	221030	149520

Typical Installations (Cobot and fixed/automation pulsed MIG or conventional MIG.)



1 Power Source

See page 7. All power sources are equipped with both Modbus TCP and EtherNet/IP communication, and include a 6.7-foot (2 m) Ethernet communication cable.

2 Wire Drive Motor Assembly

See page 7. Auto Deltaweld Basic only operates with a Miller Wire Drive.

X Robot Controller Connection

- a **Modbus TCP** — Requires Ethernet cable. 6.7-foot (2 m) cable included with power source. See page 7 for individual cables.
- b **EtherNet/IP™** — Requires Ethernet cable. 6.7-foot (2 m) cable included with power source. See page 7 for individual cables.

3 ArcConnect Cables

See page 7 for available ArcConnect cables.

4 Additional Connection Cables

Order from Miller or from integrator.

5 Cobot

User-provided cobot.

6 Base and Spool Accessories

See page 7 for Miller spool assembly or alternative.

Ordering Information

Equipment and Options	Stock No.	Description	Qty.	Price
1 Power Source				
Auto Deltaweld™ 500 Basic	907863	500 A, 208/230/460 V, for Modbus or EtherNet/IP™ robot controller		
	907864	500 A, 575 V, for Modbus or EtherNet/IP™ robot controller		
2 Wire Drive Motor Assembly				
Auto Deltaweld Basic Fixed Wire Drive	301728	Left-hand fixed wire drive		
ArcConnect™ Cable (Choose One)				
3 90 Degree ArcConnect Cable	294080006	6 ft. (1.8 m)		
Standard ArcConnect Cable	280471009	9 ft. (2.7 m)		
	280471015	15 ft. (4.6 m)		
	280471025	25 ft. (2.7 m)		
4 Additional Connection Cables		Order feeder and work cables separately from Miller or from your integrator		
5 Tregaskiss® Robotic MIG Guns, Peripherals and Consumables		Order separately. Visit Tregaskiss.com for models and information on TOUGH GUN® robotic MIG guns, TOUGH GUN® reamers, QUICK LOAD® liners and TOUGH LOCK® consumables		
Accessories				
6 Base and Spool Support	301752			
Upright with Hub and Spindle	301753			
Spool Cover	295231			
Ethernet Cable	300734 300736	9.8 ft. (3 m) 32.8 ft. (10 m) Industrial-grade 360-degree-shielded Cat 5 Ethernet cable with conventional RJ45 overmolded four-pole connector on one end to connect to factory network, and industrial M12 overmolded connector on the other end to attach to Auto Deltaweld power source — cable supports 10/100 Mbits-per-second transmission rate. Note: power source includes a 6.7 ft. (2 m) Ethernet cable		
Drive Rolls		See page 5		
Coolmate™ Cooler		See literature AY/7.2		

Date:

Total Quoted Price:

Distributed by:

