

Deltaweld® Series

Issued March 2003 • Index No. DC/16.2

**MIG Welding
Power Source** 

Quick Specs



Heavy Industrial Applications

Heavy Equipment Manufacturing
Truck and Trailer Manufacturing
Ship and Boat Building
Tank/Pressure Vessel Fabrication
Manufacture of Automotive Equipment
Railcar/Locomotive Fabrication and Repair
Furniture Manufacture
Structural Steel Fabrication
Sheet Metal Fabrication
Maintenance

Processes

MIG (GMAW)
Flux Cored (FGAW)
Air Carbon Arc (CAC-A)
Cutting and Gouging
Submerged Arc (SAW)

Input Power 302/402: 3-Phase Power
452/602: 3-Phase Power
652/852: 3-Phase Power

Rated Output 302/402: 300 A at 32 VDC, 100% Duty Cycle
452/602: 450 A at 38 VDC, 100% Duty Cycle
652/852: 650 A at 44 VDC, 100% Duty Cycle

Weight 302/402: 323 lb (147 kg)
452/602: 384 lb (174 kg)
652/852: 472 lb (214 kg)

The Power of Blue.®

Superior arc welding performance with MIG welding.

Internal digital voltage control (DVC) enables operator to preset weld voltage before striking an arc.

Two positive output terminals provide high/low stabilizer selection. Allows operator to optimize arc performance.

Line voltage compensation ensures consistent weld performance by keeping output power constant even if primary input power varies by $\pm 10\%$.

Simple control panel provides easy, efficient operation.

Digital voltmeter and ammeter are easy to read, even at 30 ft (9.2 m).

14-pin receptacle provides quick, direct connection to Miller 14-pin wire feeders and accessories.

115 V duplex receptacle provides 15 amps of auxiliary power.



Deltaweld 452/602

Remote on/off capabilities allow operator to turn power source on/off from a distance.

Remote voltage control allows operator to change voltage from feeder.

Power efficient for exceptional value and return on your investment.

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

Enclosed circuit boards provide additional protection from contaminants resulting in longer service life.

PC board protection prevents the wire feeder power or other stray voltages (less than 115 VAC) from harming the power source PC board.

Power cord strain relief provided for your convenience at installation.

Thermal overload protection light indicates power shutdown. Helps prevent machine damage if the duty cycle is exceeded or airflow is blocked.



Power source is warranted for 3 years, parts and labor.
Original main power rectified parts are warranted for 5 years.

MADE IN **USA**
APPLETON, WI **USA**



Miller Electric Mfg. Co.
An Illinois Tool Works Company
1635 West Spencer Street
Appleton, WI 54914 USA

International Headquarters
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USA FAX: 920-735-4134
Canadian FAX: 920-735-4169
International FAX: 920-735-4125

Web Site
www.MillerWelds.com



Deltaweld® 302/402 Specifications (Subject to change without notice.)



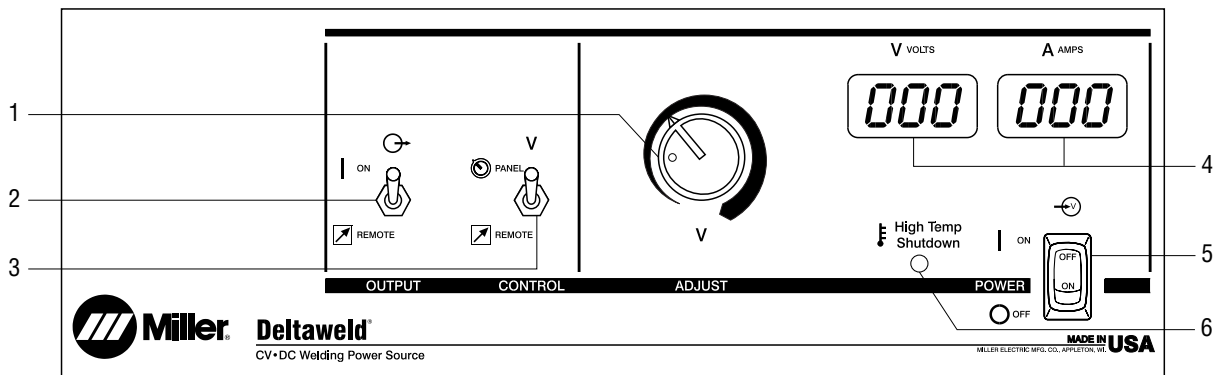
Rated Output	Voltage Range	Recommended Welding Range	Max. Open-Circuit Voltage	Amps Input at Rated Output, 50/60 Hz								Dimensions	Net Weight	
				200 V	230 V	380 V	400 V	440 V	460 V	575 V	KVA			KW
300 A at 32 VDC, 100% Duty Cycle	10-32 V	15-32 V	42 VDC	48	42	27	25	23	21	17	16.9	12.9	H: 30 in (762 mm) including lift eye W: 23 in (585 mm) D: 30-1/2 in (775 mm) including strain relief	323 lb (147 kg)

Note: For input conductor and fuse size information consult the Owner's Manual.

Deltaweld 302 and 402 (without CE) certified by Canadian Standards Association to both Canadian and U.S. Standards.

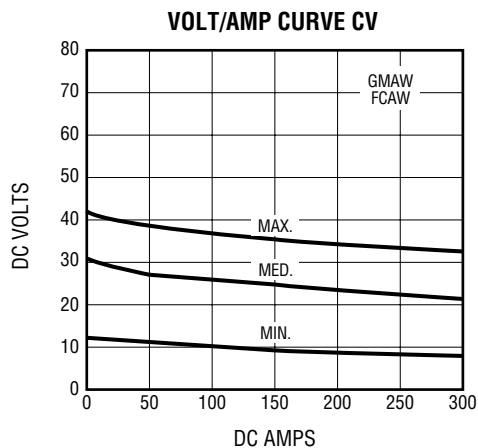
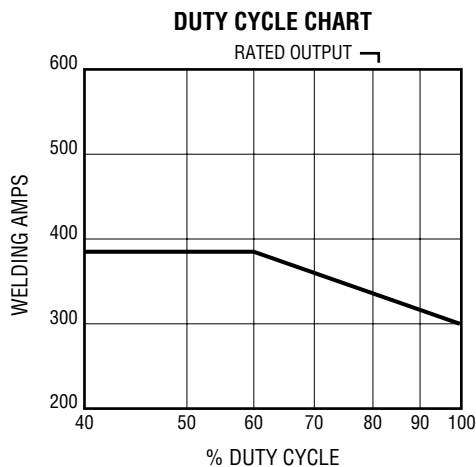
50/60 Hz models with CE Specifications are manufactured according to the Standards IEC-974-1 and EN-60974-1.

Control Panel



- 1. Voltage Adjustment Control
- 2. Output Switch
- 3. Remote Voltage Control Switch
- 4. Digital Meters
- 5. Power Switch with Indicator Light
- 6. High Temperature Shutdown Light

Performance Data



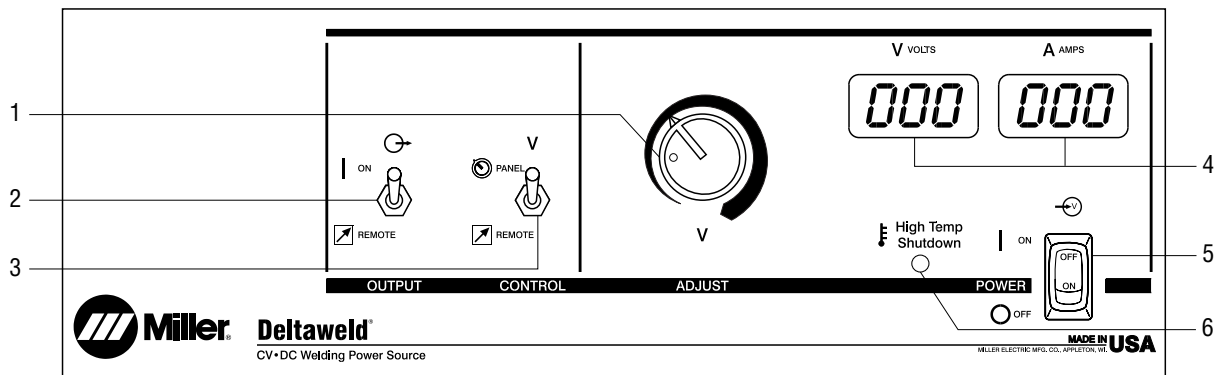
Rated Output	Voltage Range	Recommended Welding Range	Max. Open-Circuit Voltage	Amps Input at Rated Output, 50/60 Hz								Dimensions	Net Weight	
				200 V	230 V	380 V	400 V	440 V	460 V	575 V	KVA			KW
450 A at 38 VDC, 100% Duty Cycle	10–38 V	15–38 V	48 VDC	72	63	39	37	33	32	25	25.1	21.1	H: 30 in (762 mm) including lift eye W: 23 in (585 mm) D: 38 in (966 mm) including strain relief	384 lb (174 kg)

Note: For input conductor and fuse size information consult the Owner's Manual.

Deltaweld 452 and 602 (without CE) certified by Canadian Standards Association to both Canadian and U.S. Standards.

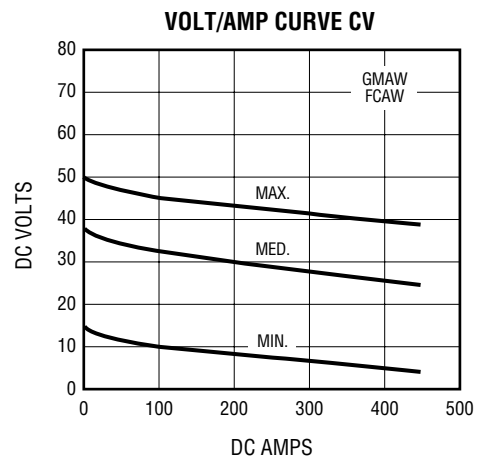
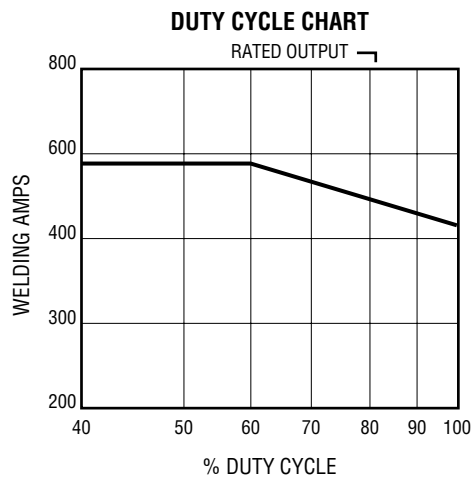
50/60 Hz models with CE Specifications are manufactured according to the Standards IEC-974-1 and EN-60974-1.

Control Panel



- 1. Voltage Adjustment Control
- 2. Output Switch
- 3. Remote Voltage Control Switch
- 4. Digital Meters
- 5. Power Switch with Indicator Light
- 6. High Temperature Shutdown Light

Performance Data



Deltaweld® 652/852 Specifications (Subject to change without notice.)



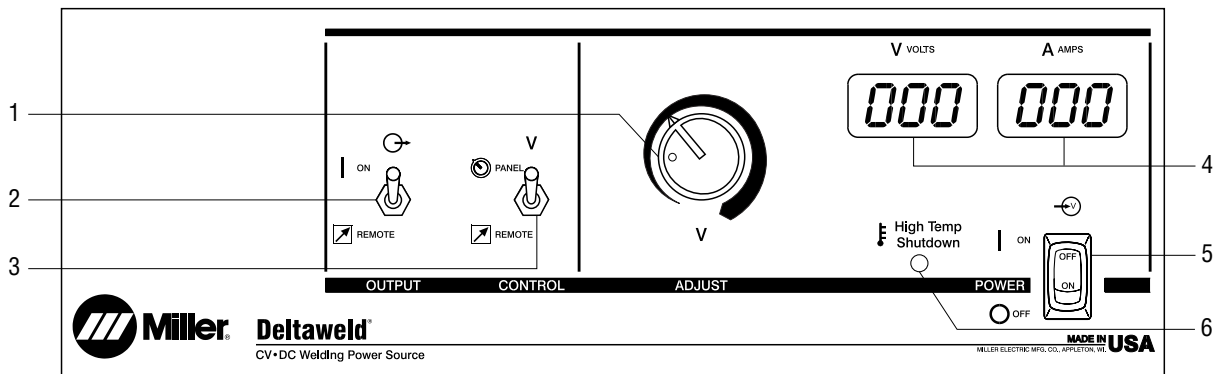
Rated Output	Voltage Range	Recommended Welding Range	Max. Open-Circuit Voltage	Amps Input at Rated Output, 50/60 Hz								Dimensions	Net Weight
				230 V	380 V	400 V	440 V	460 V	575 V	KVA	KW		
650 A at 44 VDC, 100% Duty Cycle	10-44 V	15-44 V	54 VDC	96	58	54	50	48	38	38.2	34.2	H: 30 in (762 mm) including lift eye W: 23 in (585 mm) D: 30-1/2 in (775 mm) including strain relief	472 lb (214 kg)

Note: For input conductor and fuse size information consult the Owner's Manual.

SR® Deltaweld 652 and 852 (without CE) certified by Canadian Standards Association to both Canadian and U.S. Standards.

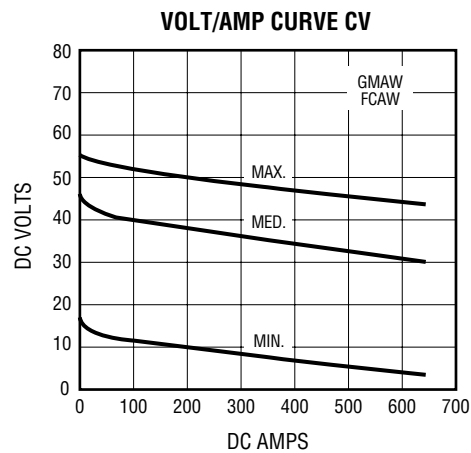
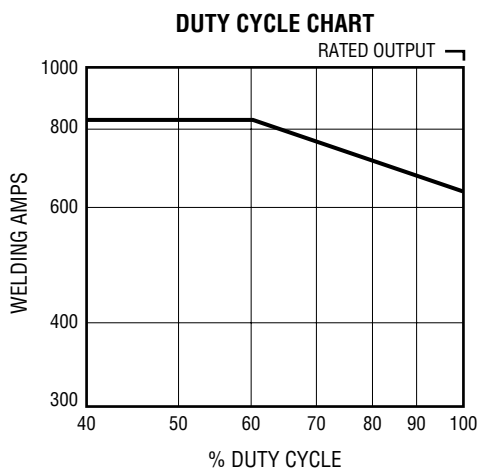
50/60 Hz models with CE Specifications are manufactured according to the Standards IEC-974-1 and EN-60974-1.

Control Panel



- 1. Voltage Adjustment Control
- 2. Output Switch
- 3. Remote Voltage Control Switch
- 4. Digital Meters
- 5. Power Switch with Indicator Light
- 6. High Temperature Shutdown Light

Performance Data

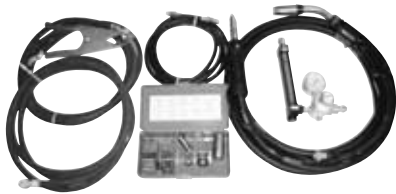


Genuine Miller Options

Air Filter Kit #042 939 Field
Reusable air filter helps protect internal components from dust and dirt, reducing need for maintenance and providing extended service life. Easily attaches and detaches from front of the power source.

Ground Current Sensor #195 048 Field
Disables power source if weld current is present on primary ground.

Genuine Miller Accessories



NEW! Industrial MIG Kit #195 197
Includes 15 ft, 2/0 power cable and work lead with clamp, regulator/flow meter with 15 ft gas hose, Roughneck C-4015 MIG gun and consumable kit.

Remote On/Off Control #042 869
Allows you to turn power source on or off from a distance of 20 ft (6 m). This is especially useful if your power source is located up in a mezzanine.

Polarity Control #042 871
This dual-function control is designed for use with dual wire feeders or any application where electrical isolation and/or polarity reversing of weld current is required. Both functions can be used at the same time.

Process Control Selector #042 872
Allows you to easily change weld processes. Also includes features of Polarity Control.



Standard Running Gear #042 886
The large 10 in (254 mm) rear wheels and 5 in (127 mm) front casters on this running gear provide excellent mobility on the shop floor, making it easier to move the power source around and over cables and cracks. Very easy to install. Handles double as weld cable holder.

Standard Cylinder Rack #042 887
Holds two cylinders. Only installs on Standard Running Gear.



Rough Terrain Running Gear #043 043
This two-wheel running gear features pneumatic tires for extra mobility. Handles double as a cable holder. (Not compatible with cylinder rack.)



(Note: Both sides lift as shown.)

Cylinder Rack/Lift #043 005
Miller's patent pending cylinder rack features a lift which moves the cylinders up onto the rack and into position without manual lifting! The rack accommodates two cylinder bottles, and can be attached directly to the Standard Running Gear.

International Cable Adapter

Note: Order from Miller Service Parts

#168 077 Female, Qty 1
Dinse brand insulated female twist lock connector installs on output stud, providing quick disconnect of secondary weld cables.

#042 418 Male, Qty 1
Cable-mounted Dinse brand insulated male twistlock connector accepts #1 or #2 AWG cable sizes.

Water Coolant Systems

For more information, see Miller Coolant Systems Lit. Index No. AY/7.2.



Coolmate™ 3

#043 007 115 VAC

#043 008 230 VAC

For use with water-cooled torches rated up to 600 amps. Unique paddle-wheel indicator, external filter and easy fill spout.

Coolmate™ V3 #043 009 115 VAC

For use with water-cooled torches rated up to 500 amps. Vertical design conveniently mounts to Miller cylinder rack in place of one cylinder.

Coolmate™ 4 #042 288 115 VAC

For use with water-cooled torches rated up to 600 amps. Tough molded polyethylene case with carrying handle.

Coolant #043 810

Sold in cases of four 1-gallon recyclable plastic bottles. Miller coolants contain a base of ethylene glycol and deionized water to protect against freezing to -37°F (-38°C) or boiling to 227°F (108°C). Also contains a compound that resists algae growth.

Wire Feeders



70 Series Wire Feeders

S-74S #195 057

S-74D #195 058

S-74DX #195 059

D-74S #195 060

D-74D #195 061

D-74DX #195 062

Heavy-duty, industrial, constant-speed 24 VAC semiautomatic wire feeders in dual or single models, with available digital meters. Ideal for high-duty-cycle MIG welding (GMAW) and Flux Cored welding (FCAW). Accommodates a wide variety of wire sizes and types. See Lit. Index No. M/3.0.



22A Wire Feeder #193 066

Simple, reliable, 24 VAC constant-speed semiautomatic wire feeder, best suited for small diameter wires. Accommodates up to 60 lb (27.2 kg) spool of welding wire when using optional wire reel assembly. See Lit. Index No. M/11.0.



XR™-Control #181 538

Push-pull wire feed system offers unparalleled performance for aluminum MIG welding. See Lit. Index No. M/1.7.



Swingarc™ Boom-Mounted Wire Feeders

Single and dual 24 VAC semiautomatic wire feeders are available with 12 ft (3.7 m) and 16 ft (4.9 m) booms. Ideal for long reach and complete maneuverability when working on large weldments, or in hard-to-reach areas. See Lit. Index No. M/13.0.

Extension Cables for 14-Pin Plugs to 14-Pin Sockets

#122 973 25 ft (7.6 m)

#122 974 50 ft (15.2 m)

#122 975 75 ft (22.8 m)

This extension cord makes a direct connection between the power source and the accessory control or wire feeder. No messy splicing or adapting required.

Roughneck™ Guns

See Lit. Index No. AY/11.0.

Ordering Information

Equipment and Options	Stock No.	Description	Qty.	Price
Power Source				
Deltaweld® 302	#903 376* #903 392*	200-208/230/460 V, 60 Hz 230/460/575 V, 60 Hz		
Deltaweld® 402	#903 393* #903 393-01-5**	380/400/440 V, 50/60 Hz 380/400/440 V, 50/60 Hz w/CE		
Deltaweld® 452	#903 377* #903 394*	200-208/230/460 V, 60 Hz 230/460/575 V, 60 Hz		
Deltaweld® 602	#903 395* #903 395-01-5**	380/400/440 V, 50/60 Hz 380/400/440 V, 50/60 Hz w/CE		
Deltaweld® 652	#903 396*	230/460/575 V, 60 Hz		
Deltaweld® 852	#903 397* #903 397-01-3**	380/400/440 V, 50/60 Hz 380/400/440 V, 50/60 Hz w/CE		
Air Filter Kit	#042 939	Field		
Ground Current Sensor	#195 048	Field		
Wire Feeders				
70 Series	#195 057 #195 058 #195 059 #195 060 #195 061 #195 062	S-74S. See Lit. Index No. M/3.0 S-74D. See Lit. Index No. M/3.0 S-74DX. See Lit. Index No. M/3.0 D-74S. See Lit. Index No. M/3.0 D-74D. See Lit. Index No. M/3.0 D-74DX. See Lit. Index No. M/3.0		
22A	#193 066	See Lit. Index No. M/11.0		
XR™-Control	#181 538	See Lit. Index No. M/1.7		
Swingarc™ Boom Feeders		See Lit. Index No. M/13.0		
Extension Cables	#122 973 #122 974 #122 975	25 ft (7.6 m) 50 ft (15.2 m) 75 ft (22.8 m)		
Roughneck™ Guns		See Lit. Index No. AY/11.0		
Miscellaneous				
NEW! Industrial MIG Kit	#195 197	Includes 15 ft, 2/0 power cable and work lead with clamp, regulator/flow meter with 15 ft gas hose, Roughneck C-4015 MIG gun and consumables kit		
Remote On/Off Control	#042 869			
Polarity Control	#042 871			
Process Control Selector	#042 872			
Standard Running Gear	#042 886			
Cylinder Rack/Lift	#043 005			
Standard Cylinder Rack	#042 887			
Rough Terrain Running Gear	#043 043	Not compatible with cylinder rack		
International Cable Adapter (Order from Miller Service Parts)	#168 077 #042 418	Female Male		
Coolmate™ 3	#043 007 #043 008	115 VAC 230 VAC		
Coolmate™ V3	#043 009	115 VAC		
Coolmate™ 4	#042 288	115 VAC		
Coolant	#043 810			
Primary Power Cable				
Secondary Welding Cables				
Work Cable and Clamp				

Date:

Total Quoted Price:

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

**  50/60 Hz models with CE Specifications are manufactured according to the Standards IEC-974-1 and EN-60974-1.
Conforms with NEMA EW 1 "Electric Arc Welding Power Source," Class I (100).

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