

# Mark VI

Issued June 2001 • Index No. DC/9.8

**Multiple Arc  
Welding System** 

## Quick Specs

### Heavy Industrial Applications

Construction  
Rental Fleets  
Fab Shops  
Petro Chemical  
Shipbuilding  
Training Facilities  
Maintenance

### Processes

Stick (SMAW) **CC**  
TIG (GTAW) **CC**  
Air Carbon Arc (CAC-A)  
Cutting and Gouging **CC**  
Flux Cored (FCAW) **CV**  
MIG Spray Transfer (GMAW)  
with Voltage-Sensing Feeder **CV**

**Voltage Range** **CC:** 20–315 A  
**CV:** 10–30 V (with CC/CV Module)

**Max. Open-Circuit Voltage** **CC:** 75 VDC  
**CV:** 38 VDC  
**OCV Module:** 20 VDC  $\pm$  2 V

**Weight** Mark VI: 1725 lb (784 kg)  
Mark VI-2: 1575 lb (718 kg)

## The Power of Blue.®

### Multiple capabilities CC or CC/CV.

Versatility and outstanding arc welding performances in both CV (MIG) and CC (TIG and Stick). The CC/CV module has a high quality arc for welding with cored wires. Miller does not recommend that the CC/CV module be used for short circuit transfer MIG welding. The CC module has the same great arc characteristic as the Gold Star 302.

Rugged and durable enclosure **steel frame** protects system.

Capable of **four to six welding arcs**, Miller's unique modules are designed for easy removal and connection. If you need only four arcs today, purchase the Mark VI-2. If you have a requirement for more arcs, additional modules (CC or CV) are available for purchase.

**Weighs less than one ton** which makes it portable when secured on a flatbed, construction truck, or when moved by one-ton hoist. Fits through 36 in (914 mm) door opening.



**Optional Low OCV** — MEMCO engineers have designed a simple system that reduces the Open Circuit Voltage on the Mark VI products to 18 volts when the welding power source is not in use. Now with this system built into the power source, set-up and operation of the system is greatly simplified, with minimal impact on the arc starting performance.

**Adjustable arc control** lets you get in tight without sticking the electrode. An electrode compensation circuit ensures arc control performance regardless of the electrode size.

**Hot Start™** makes it easy to start difficult-to-start Stick electrodes, such as E-6010 and E-7018.

**Line voltage compensation** keeps output power constant even if primary input power varies by  $\pm$ 10%, ensuring consistent weld performance.

**Operator identification label** helps operators remember who is using which module.

60 Hz models have two **115 V GFCI duplex receptacles** which supply 15 amps of auxiliary power. 50 Hz models have one 220 V and one 115 V duplex receptacle.

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

**Work connections** are electrically isolated from the frame, and **service panels in chassis** provide easy access to internal parts for routine maintenance.

**TRUE BLUE®**  
3YR. WARRANTY

Welder/generator is warranted for 3 years, parts and labor.  
Original main power rectified parts are warranted for 5 years.

MADE IN **USA**  
APPLETON, WI



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

**International Headquarters**  
Phone: 920-735-4505  
USA FAX: 920-735-4134  
Canadian FAX: 920-735-4169  
International FAX: 920-735-4125

**Web Site**  
www.MillerWelds.com



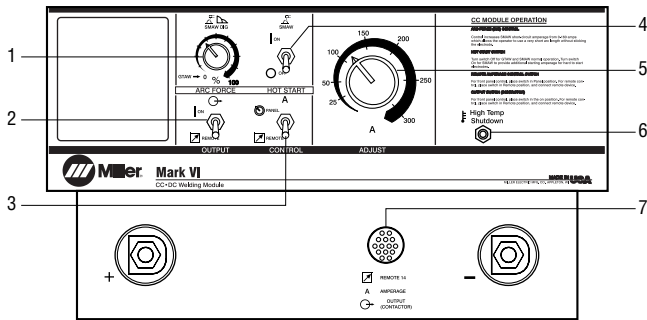
# Specifications (Subject to change without notice.)



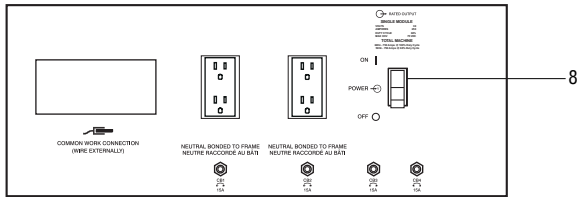
Rated Welding Output at 44 Volts DC	DC Amperage/Voltage Range	Max. Open-Circuit Voltage (DC)	Amps Input at 750 Amps Output, 50/60 Hz 230 V 380 V 400 V 415 V 440 V 460 V 575 V KVA KW	Dimensions	Net Weight
<b>Single Module</b> 250 A at 60% Duty Cycle	20–315 A in CC Mode	75 VDC in CC Mode	164 97 92 91 84 82.5 66.1 65.2 41.9	H: 65 in (1651 mm) W: 56-3/4 in (1442 mm) D: 34-1/4 in (870 mm)	Mark VI : 1725 lb (784 kg)
<b>Main Transformer</b> <b>60 Hz:</b> 750 A at 100% Duty Cycle 1500 A at 25% Duty Cycle <b>50 Hz:</b> 750 A at 60% Duty Cycle 1160 A at 25% Duty Cycle	10–30 V in CV Mode with CC/CV Module	38 VDC in CV Mode with CC/CV Module 20 VDC ±2 V Low with OCV Modules			Mark VI-2: 1575 lb (718 kg)

## Control Panel

UPPER PANEL FOR CC UNITS

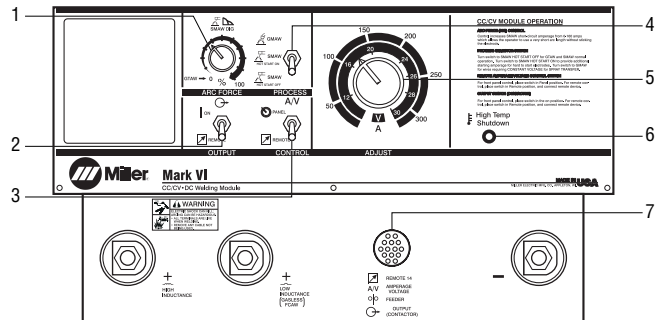


LOWER PANEL

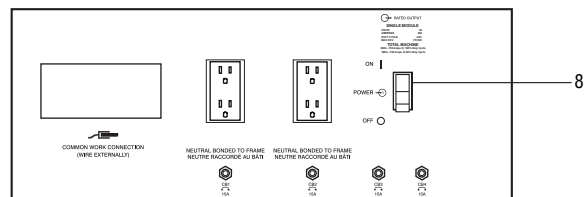


1. Arc Force Control
2. Remote/On Output Contactor Control
3. Remote/Panel Output Amperage Control
4. Hot Start On/Off Switch
5. Amperage Adjustment Control
6. High-Temperature Shut Off Indicator
7. 14-Pin Remote Receptacle
8. Power On/Off Switch

UPPER PANEL FOR CC/CV UNITS



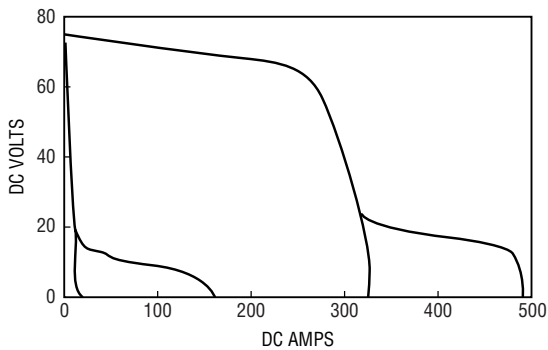
LOWER PANEL



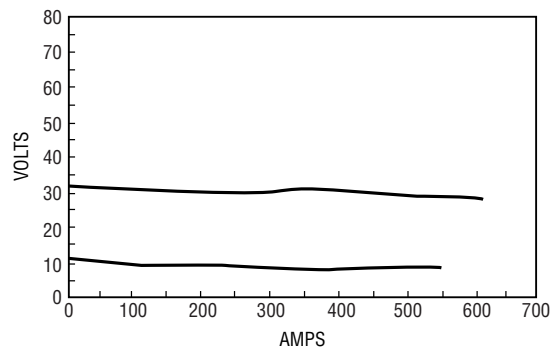
1. Arc Force Control
2. Remote/On Output Contactor Control
3. Remote/Panel Output Amperage Control
4. Process Selector
5. Amperage/Voltage Adjustment Control
6. High-Temperature Shut Off Indicator
7. 14-Pin Remote Receptacle
8. Power On/Off Switch

## Performance Data

CC VOLT/AMP CURVES FOR EACH MODULE

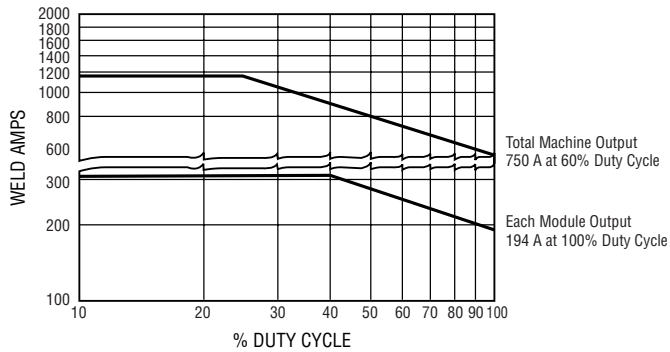


CV VOLT/AMP CURVES FOR EACH MODULE

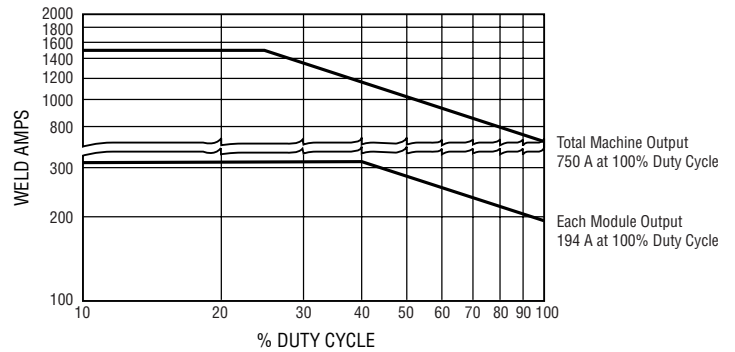


## Performance Data (continued)

### 50 Hz DUTY CYCLE CHART



### 60 Hz DUTY CYCLE CHART



## Genuine Miller Accessories

### Process Selector Control #042 872

Allows you to easily change weld processes without changing cables—from MIG to TIG or TIG to Stick. Also for use with dual wire feeders and applications where electrical isolation and/or polarity reversing of weld current is required.

### Stick Hook-up Kit

**#173 851** 50 ft (15.2 m) 2/0 cable  
Includes electrode holder, weld cable and work cable with clamp.

### MIG Hook-Up Kit

**#173 856** 25 ft (7.6 m) 2/0 cable  
Includes gas hose assembly, lugged weld cable assembly and work cable with clamp.



### HF-251D-1 High-Frequency Arc Starter/Stabilizer #042 388

This portable 250 A, 60% duty cycle unit adds high frequency to the welding circuit to help start the arc when using the TIG (GTAW) process. Operates on 115 VAC 50/60/100 Hz. See Lit. Index No. AY/5.1.

## Wire Feeders



### Super S-32P Wire Feeder (Domestic only) #159 928

Compact, portable wire feeder for .030–5/64 in (0.8–2.0 mm) hard and flux cored wire. See Lit. Index No. M/6.3. For International model, contact factory.



### S-22P12 Wire Feeder #125 616

Compact, lightweight 24 VAC constant-speed semi-automatic wire feeder provides portability in outdoor environments. Primarily designed for gas-shielded wires. Accommodates up to a 30 lb (13.6 kg), 12 in (304 mm) diameter spool. Order extension cord separately. See Lit. Index No. M/6.3.

## Remote Controls and Switches



### RFCS-14 Foot Control #043 554

Heavy-duty foot current and contactor control. Includes 20 ft (6 m) cord and 14-pin plug.



### RCC-14 Remote Contactor and Current Control #151 086

Rotary-motion fingertip control. Fastens to TIG torch using two Velcro strips. Allows complete current and contactor control at operator's fingertips. Includes 28 ft (8.5 m) cord and plug.



### RCCS-14 Remote Contactor and Current Control #043 688

Up-and-down rotary-motion fingertip control. Great for applications that require a finer amperage control. Includes 28 ft (8.5 m) control cord.

# Genuine Miller Accessories (continued)

## Remote Controls and Switches



**RHC-14 Hand Control**  
**#129 340**  
 Miniature hand control for remote current and contactor control.  
 Dimensions: 4 x 4 x 3-1/4 in (102 x 102 x

82 mm). Includes 20 ft (6 m) cord and 14-pin plug.



**RMLS-14 #129 337**  
 Momentary- and maintained-contact rocker switch for contactor control. Push forward for maintained contact and back for momentary contact. Includes 20 ft (6 m) cord and 14-pin plug.

## 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)

Extension cords make a direct connection between the power source and the accessory control. No messy splicing or adapting required.

## Ordering Information

Power Source and Options	Stock No.	Description	Qty.	Price
Mark VI-2 (Four Modules)	<b>#903 588</b>	230/460/575 V, 60 Hz		
Mark VI CC (Six Modules)	<b>#903 512</b> <b>#903 569</b>	230/460/575 V, 60 Hz 380/400/415/440-460 V, 50/60 Hz		
Mark VI CC/CV (Six Modules)	<b>#903 645</b> <b>#903 660</b> <b>#903 645-01-1</b>	230/460/575 V, 60 Hz 380/400/415/440-460 V, 50/60 Hz Low OCV modules		
Single CC Module	<b>#903 661</b>	CC module, 50/60 Hz		
Single CC/CV Modules	<b>#903 646</b> <b>#903 659</b> <b>#903 899</b>	CC/CV module, 60 Hz CC/CV module, 50/60 Hz CC/CV, Low OCV modules		
<b>Stick Accessories</b>				
Stick Hook-up Kit	<b>#173 851</b>	2/0 cable, 50 ft. Includes electrode holder, weld cable and work cable with clamp		
Stick Electrodes				
<b>TIG Accessories</b>				
HF-251D-1	<b>#042 388</b>	HF arc starter/stabilizer		
Torch and Consumables				
Tungsten				
<b>MIG Accessories</b>				
Super S-32P	<b>#159 928</b>	See Lit. Index No. M/6.3		
S-22P12	<b>#125 616</b>	See Lit. Index No. M/6.3		
MIG Hook-Up Kit	<b>#173 856</b>	2/0 cable, 25 ft. Includes gas hose, weld cable, work cable w/ clamp, and regulator/flowmeter		
<b>Remote Controls</b>				
RFCS-14	<b>#043 554</b>	Foot control		
RCC-14	<b>#151 086</b>	Fingertip control		
RCCS-14	<b>#043 688</b>	Fingertip control		
RHC-14	<b>#129 340</b>	Hand control		
RMLS-14	<b>#129 337</b>	Momentary- and maintained-contact switch		
Extension Cords	<b>#122 973</b> <b>#122 974</b> <b>#122 975</b>	25 ft (7.6 m) 50 ft (15.2 m) 75 ft (22.9 m)		
<b>Miscellaneous</b>				
Process Selector Control	<b>#042 872</b>			
Primary Power Cord				
Gas Cylinder				
Gas Hose and Fittings				

Date:

Total Quoted Price:

Distributed by:

