

XMT[®] 304/456 CC/CV

Issued Jan. 2010 • Index No. DC/18.8

Multiprocess Welding
Power Source 

Quick Specs

Heavy Industrial Applications

Construction
Shipbuilding
Railroad
Truck/Trailer Manufacturing
Fabrication
Repair Shops
Rental Fleets

Processes

MIG (GMAW)/Pulsed MIG (GMAW-P)
Stick (SMAW)
TIG (GTAW)
Flux Cored (FCAW)
Air Carbon Arc Cutting and Gouging (CAC-A)

Input Power 304: Requires 3- or 1-Phase Power
456: Requires 3-Phase Power

Output Power 304: 10–35 V, 5–400 A
456: 10–38 V, 5–600 A

Weight 304: Net: 79.5 lb (36.1 kg) Ship: 88.6 lb (40.2 kg)
456: Net: 118 lb (53.5 kg) Ship: 129 lb (58.5 kg)

The Power of Blue.[®]

Wind Tunnel Technology[™] protects electrical components and PC boards from contamination.

Fan-On-Demand[™] cooling system operates only when needed, reducing noise, energy use and the amount of contaminants pulled through machine.

Lift-Arc[™] allows TIG starting without the use of high-frequency. Starts the arc without contaminating the weld with tungsten.

Line voltage compensation keeps welding output constant even if input power varies by +/-10%.

Adaptive Hot Start[™] increases the output amperage at the start of a weld if necessary, eliminating electrode sticking.



XMT 304 CC/CV
with Auto-Link[®]

XMT 456 CC/CV
with Manual Link

Lightweight, aerospace-grade aluminum case offers protection with the benefit of reduced weight.

Inverter arc control technology provides greater puddle control for superior 6010 Stick electrode performance.

Large, dual digital meters are easy to view and are presettable to ease setting weld output.

Process selector switch reduces the number of control setup combinations without reducing any features.

Pulsed MIG capabilities with optional Optima control reduces spatter and distortion, allows better out-of-position puddle control, and provides potential reduction of fume particle emission.

115 VAC auxiliary power provides 10 amps of circuit-breaker-protected power for water circulators, etc. *Standard on XMT 456, optional on XMT 304.*



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



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An Illinois Tool Works Company
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Web Site
www.MillerWelds.com



XMT® 304 CC/CV Specifications (Subject to change without notice.)



Input Power	Rated Output at 60% Duty Cycle	Voltage Range in CV Mode	Amperage Range in CC Mode	Max. Open-Circuit Voltage	Amps Input at Rated Load Output, 60 Hz,							Dimensions	Weight
					208 V	230 V	400 V	460 V	575 V	KVA	KW		
Three-Phase	300 A at 32 VDC	10–35 V	5–400 A	90 VDC	33.7	30.5	17	18.9	15.2	12.2	11.6	H: 17 in (432 mm) W: 12-1/2 in (318 mm) D: 24 in (610 mm)	79.5 lb (36.1 kg)
Single-Phase	225 A at 29 VDC	10–35 V	5–400 A	90 VDC	52.4	47.4	—	24.5	—	11.3	7.6		

Certified to both the Canadian and U.S. Standards for welding equipment.

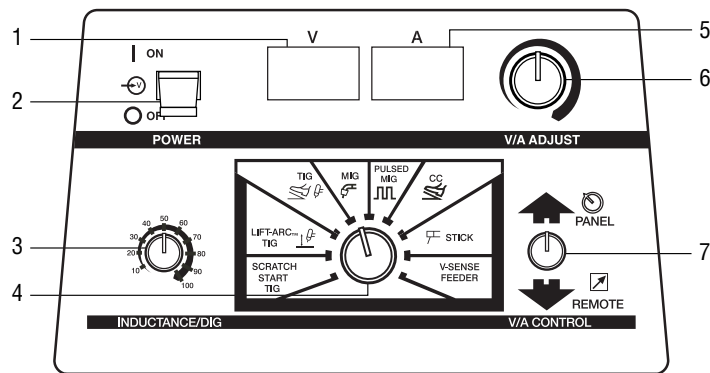
XMT® 304 CC/CV Control Panel

Additional Features

Auto-Link® circuit automatically links the power source to primary voltage being applied (230/460 or 460/575 VAC, single- or three-phase).

Ultra-tough, polycarbonate-blended cover for control panel protects front controls from damage.

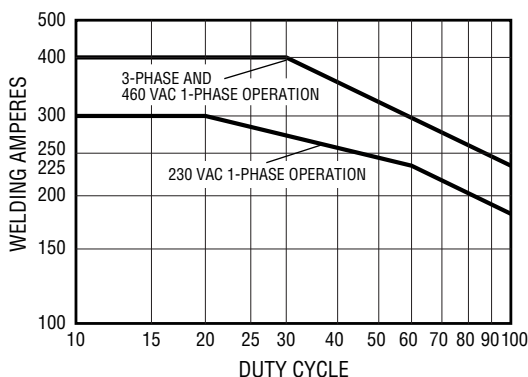
International-style weld disconnects provide high-quality weld cable connections.



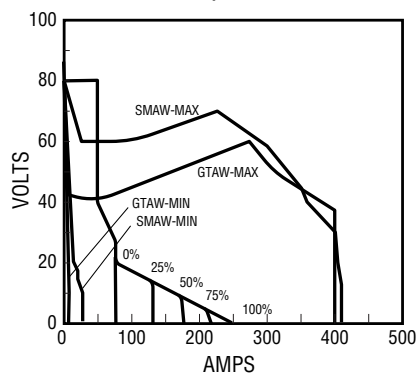
1. Voltmeter
2. Power On/Off Switch
3. Inductance/Dig Control
4. Process Selector Switch (Rotary Switch)
5. Ammeter
6. Voltage/Amperage Adjustment Control
7. Voltage/Amperage Control Switch

XMT® 304 CC/CV Performance Data

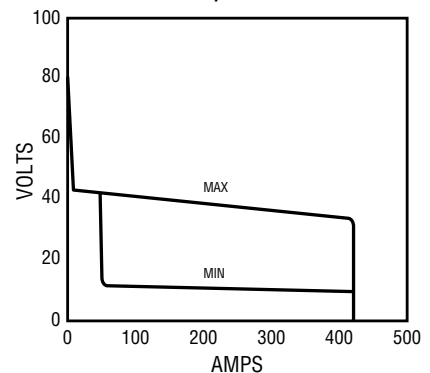
DUTY CYCLE CHART



CC VOLT/AMP CURVE



CV VOLT/AMP CURVE



XMT® 456 CC/CV Specifications (Subject to change without notice.)



Input Power	Rated Output	Voltage Range in CV Mode	Amperage Range in CC Mode	Max. Open-Circuit Voltage	Amps Input at Rated Load Output, 60 Hz						Dimensions	Weight
					230 V	400 V	460 V	575 V	KVA	KW		
Three-Phase	450 A at 38 VDC, 100% Duty Cycle 565 A at 43 VDC, 60% Duty Cycle	10–38 V	5–600 A	95 VDC	50.8	31	27.8	24.4	21.2	19.2	H: 17 in (432 mm) W: 14-1/2 in (368 mm) D: 26 in (660 mm)	118 lb (53.5 kg)

Certified to both the Canadian and U.S. Standards for welding equipment.

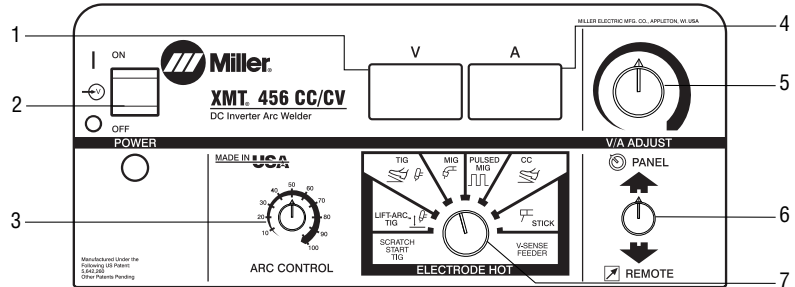
XMT® 456 CC/CV Control Panel

Additional Features

Primary voltage display shows what primary voltage the power source is linked for without removing the side panels. Saves time and assures you that the power source has been correctly linked for available input voltage.

Unique case design helps protect internal components from dirt and dust. To connect input power cord and/or set unit up for correct input power, remove the easy-to-handle panel (1/3 case). The remaining two-thirds of the case never needs to be removed!

Optional remote on/off provides ability to turn power source on or off when it is located away from your work.

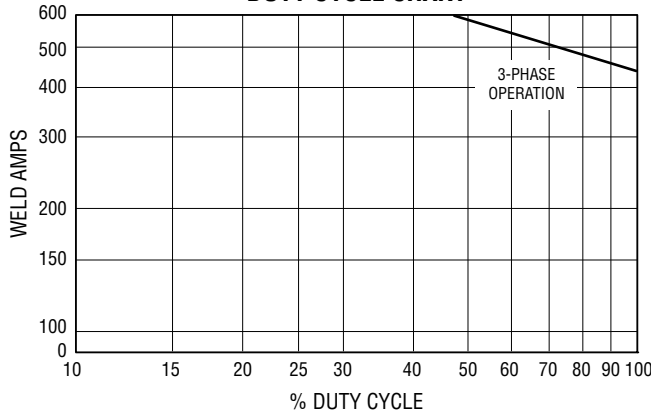


Note: XMT 456 is equipped with Stud for ring-lug output connections.

1. Voltmeter
2. Power On/Off Switch
3. Arc Control
4. Ammeter
5. Voltage/Amperage Adjustment Control
6. Voltage/Amperage Control Switch
7. Process Selector Switch (Rotary Switch)

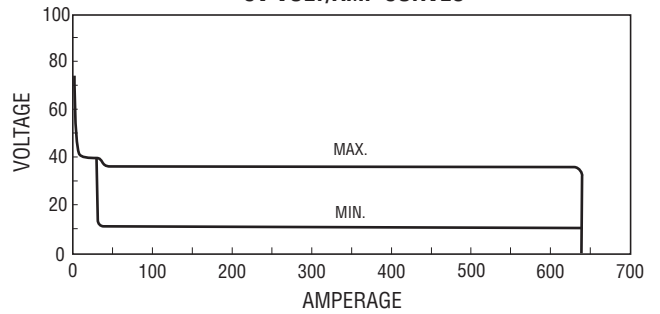
XMT® 456 CC/CV Performance Data

DUTY CYCLE CHART

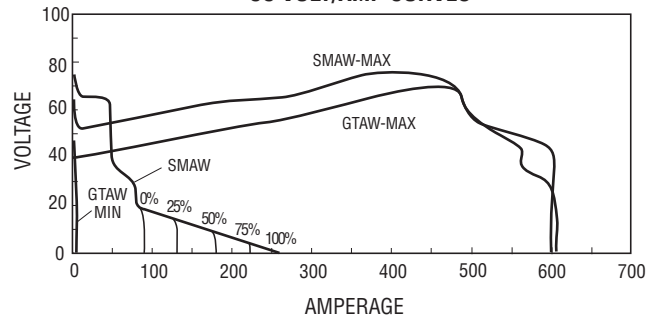


Volt/amp curves show minimum and maximum voltage and amperage output capabilities of unit. Curves of other settings fall between curves shown.

CV VOLT/AMP CURVES



CC VOLT/AMP CURVES



XMT® MIGRunner™ Components

XMT® 304 MIGRunner™ #951 312

Comes Complete With:

- XMT 304 CC/CV power source
- 22A wire feeder
- Bernard® Q400 MIG Gun
- Consumables
- .035/.045 in drive roll kit
- Regulator/flow gauge with gas hose
- MIGRunner Cart with cylinder rack
- Bottom tray will hold optional Coolmate 3 (sold separately)



Genuine Miller Accessories

Process Selector Control #042 872

Designed for use with dual wire feeders, applications where electrical isolation and/or polarity reversing of weld current is required, and for welding process changes. Includes 115 VAC/2 amp receptacle, two 14-pin receptacles and a 10 ft (3 m) 14-pin cord.



RMLS-14 #129 337 14-pin plug 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.



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.



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 14-pin plug Rotary-motion fingertip control fastens to TIG torch using two Velcro® straps. Includes 28 ft (8.5 m) control cord.

Extension Cords for Remote Controls and 24 VAC Wire Feeders

- #122 973 25 ft (7.6 m)
 - #122 974 50 ft (15.2 m)
 - #122 975 75 ft (22.8 m)
- 14-pin plug to 14-pin socket.

Note: Not for use with Optima or 60M Series.



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.



Optima™ #043 389
A multipurpose, microprocessor-based pulse control for both synergic MIG (wire welding or GMAW) or manual MIG pulsing. Use this control with the XMT 304 CC/CV

power sources and any Miller wire feeder, including automatic feeders and spool guns. Includes a 25 ft (7.6 m) cord with 14-pin plug.

Extension Cords for Optima

- #043 725 25 ft (7.6 m)
- #043 726 50 ft (15.2 m)
- #043 727 75 ft (22.9 m)



WC-24 Weld Control #137 549

Designed for use with Miller CV power sources supplying 24 VAC and 14-pin receptacles. For use with Spoolmatic 30A spool gun.



WC-115A Weld Control #137 546-01-1

Operates on 115 VAC and is designed for power sources without a 14-pin receptacle. For use with Spoolmatic 30A spool gun. Includes 10 ft (3 m) wall-type plug and power cord.



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

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

Inverter Racks



Four or Six-Arc Welding System

The Inverter Rack conveniently houses multiple XMT power sources for multiple welders. Both 4-pack and 6-pack models are available.

Features include:

- Provision to parallel power sources or common work connections
- Two lifting eyes for transportation
- Rugged skids for dragging or pushing
- Customer can install up to a maximum of 4 XMT 456 power sources

For detailed information on customized Inverter Rack systems see Lit. Index No. DC/18.81.

Running Gear



MIGRunner™ Cart #195 445 (For 304 models only)

Running Gear Cylinder Rack #300 408 (For dual feeders and 456 model)

Small footprint and easily maneuverable, with cylinder rack low enough that you do not have to lift bottles.



XMT Cylinder Cart #042 537

Carries two 160 lb (72.6 kg) gas cylinders, or one gas cylinder and one coolant system for TIG (GTAW) welding. Feeder

mounts to tray above power source.



Universal Carrying Cart and Cylinder Rack #042 934 (For 304 models only)

Holds power source, and gas cylinder up to 56 in (142.2 cm) high measuring 6 to 9 in (15.2 to 22.8 cm) in diameter.

Protective Cover



#195 478

Mildew and water resistant, odor-free cover protects your machine's finish. For 300/350 A inverters: XMT, Maxstar and Dynasty.

Wire Feeders/Guns



SuitCase® X-TREME™ 8VS #951 181
SuitCase® X-TREME™ 12VS #951 184

Lightweight, portable wire feeder for a variety of wires up to .062 in. Holds up to an 8 in (8VS) or 12 in (12VS) spool of wire. Operates on open-circuit voltage eliminating the need for a control/power cord. See Lit. Index No. M/6.41.



SuitCase® 8RC #951 186
SuitCase® 12RC #951 188

Lightweight, portable wire feeder for a variety of wires up to .062 in. Holds up to an 8 in (8RC) or 12 in (12RC) spool of wire. Operates using 14-pin control receptacle. See Lit. Index No. M/6.5.



XR Control #181 538
 Push-pull wire feed system offers unparalleled performance for aluminum MIG welding. See Lit. Index No. M/1.7.



70 Series

S-74S #951 196
S-74D #951 198
S-74DX #951 200

Heavy-duty, industrial, constant-speed 24 VAC semiautomatic wire feeders 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. Comes with FREE Bernard® Q™-Gun! See Lit. Index No. M/3.0.



Spoolmatic® 30A #130 831

A 1-lb, air-cooled spool gun that extends the weld process range by adding a handy portable system for small wire MIG. Rated 200 A at 100% duty cycle. Includes 30 ft (9.1 m) cable assembly. WC-24 (#137 549) required for use with 14-pin receptacles, order separately.

Roughneck® C-Series MIG Guns

See Lit. Index No. AY/17.0.

Ironmate™ Flux Cored Guns

See Lit. Index No. AY/16.0.

FC-1260

#195 732 10 ft (3 m)
#195 729 15 ft (4.6 m)

FC-1260LM

#194 912 10 ft (3 m)
#194 911 15 ft (4.6 m)

FC-1150

#194 864 10 ft (3 m)
#194 863 15 ft (4.6 m)

Water Coolant Systems

For more information, see the Miller Coolant Systems literature sheet, 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.



TIG Coolant #043 810

Sold in multiples of 4. Pre-mixed low-conductivity Miller coolant contains ethylene

glycol and deionized water to protect from freezing and boiling -37° to 227°F (-38° to 108°C). Coolant contains 2.4% algae growth inhibitor. 1-gallon plastic recyclable bottles.

International-Style Connectors

Note: XMT 304 power sources are equipped with International-style connectors for secondary connections.



**International/Tweco®
Adapter #042 465**
**International/Cam-Lok
Adapter #042 466**

One-piece adapter with International-style male plug (to power source) on one end and female receptacle (Tweco or Cam-Lok for weld cable connection) on other end.

International-Style Connector Kit

#042 418 50 mm

Accepts #4 or #1/0 AWG cable size.

#042 533 70 mm

Accepts #1/0 or #2/0 AWG cable size.

Kit includes one International-style male plug which attaches to the work and/or weld cables and plugs into the International-style receptacles on the power source.

Extension Kit for International-Style Cable Connectors

#042 419 50 mm

Accepts #4 or #1/0 AWG cable size.

#042 534 70 mm

Accepts #1/0 or #2/0 AWG cable size.

Used to adapt or extend weld and/or work cables. Kit includes one male International-style plug and one in-line female International-style receptacle.

Ordering Information

Power Source and Options	Stock No.	Description	Qty.	Price
XMT® 304 CC/CV	#903 471	208-230/460 VAC with Auto-Link®		
	#903 471-01-1	208-230/460 VAC with Auto-Link® and Auxiliary Power		
	#903 473	460/575 VAC with Auto-Link®		
	#903 472	400 VAC, 50/60 Hz with Auxiliary Power and CE		
XMT® 304 MIGRunner™ Package	#907 061	208-230/460 VAC with Auto-Link®		
XMT® 456 CC/CV	#907 010	230/460 VAC		
	#907 010-01-1	230/460 VAC with Remote On/Off		
	#907 011	575 VAC		
	#907 012	400 VAC with CE		
Inverter Racks (full or empty)		See Lit. Index No. DC/18.81		
Accessories				
Process Selector Control	#042 872			
HF-251D-1 HF Starter/Stabilizer	#042 388	See Lit. Index No. AY/5.1		
RFCS-14	#043 554	Foot control		
RHC-14	#129 340	Hand control		
RMLS-14	#129 337	Rocker switch		
RCC-14	#151 086	Fingertip control		
RCCS-14	#043 688	Fingertip control		
Extension Cords (For 24 VAC wire feeders and remote controls)		See page 4. Not to be used with Optima or 60M		
Optima™ MIG Pulse Control	#043 389			
Optima™ Extension Cords		See page 5		
WC-24	#137 549	For use with Spoolmatic 30A and power sources with 14-pin		
WC-115A	#137 546-01-1	For use with Spoolmatic 30A and power sources without 14-pin		
Running Gear				
MIGRunner™ Cart	#195 445	For XMT 304 models only		
Running Gear Cylinder Rack	#300 408	For dual feeders and XMT 456 model		
XMT Cylinder Cart	#042 537	For all models		
Universal Carrying Cart and Cylinder Rack	#042 934	For XMT 304 models only		
Protective Cover	#195 478			
Wire Feeders/Guns				
SuitCase® X-TREME™ 8VS/12VS	#951 181 / #951 184	See Lit. Index No. M/6.41		
SuitCase® 8RC/12RC	#951 186 / #951 188	See Lit. Index No. M/6.5		
XR™-Control	#181 538	See Lit. Index No. M/1.7		
70 Series	#951 196	S-74S. See Lit. Index No. M/3.0		
	#951 198	S-74D. See Lit. Index No. M/3.0		
	#951 200	S-74DX. See Lit. Index No. M/3.0		
Spoolmatic® 30A Spool Gun	#130 831	Requires WC-24 for use with 14-pin receptacles		
Bernard® Q™-Series MIG Guns		See Welding Components and Parts Guide		
Ironmate™ Flux Cored Guns		See Lit. Index No. AY/16.0		
Water Coolant Systems		See page 6. See Lit. Index No. AY/7.2		
International-Style Connectors		See page 7		

Date:

Total Quoted Price:



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