

XMT® Series

Issued November 2004 • 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)/Pulsed TIG (GTAW-P)*
Flux Cored (FCAW)
Air Carbon Arc Cutting and Gouging (CAC-A)

**With optional controls only —
not available with XMT 350 VS model.*

Input Power **304/350:** Requires 3- or 1-Phase Power
456: Requires 3-Phase Power

Output Power **304:** 10–35 V, 5–400 A
350: 10–38 V, 5–425 A
456: 10–38 V, 5–600 A

Weight **304:** Net: 79.5 lb (36.1 kg) Ship: 88.6 lb (40.2 kg)
350: Net: 80 lb (36.3 kg) Ship: 89.1 lb (40.4 kg)
456: Net: 118 lb (53.5 kg) Ship: 129 lb (58.5 kg)

The Power of Blue.®

**XMT 304
CC/CV with
Auto-Link®**



**XMT 456 CC/CV
with Manual Link**

**XMT 350 CC/CV
with Auto-Line™ Power
Management Technology**



**XMT 350 VS
with Auto-Line™ Power
Management Technology**

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.

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

115 VAC auxiliary power provides 10 amps of circuit-breaker-protected power for water circulators, etc. *Standard on XMT 456, optional on XMT 304 and XMT 350 CC/CV models only.*

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

NEW! XMT 350 provides more welding output with superior electrical efficiency and an amazing .95 power factor! See page 3 for details and additional features of the XMT 350.

Please see:
[page 2 for additional XMT 304 features.](#)
[page 4 for additional XMT 456 features.](#)

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

Line voltage compensation keeps welding output constant even if input power varies by +/-10%. XMT 350 models further expand line voltage compensation on 460 VAC to an amazing +37%, -59%.

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

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

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 (not available on XMT 350 VS).



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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Appleton, WI 54914 USA

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Canadian FAX: 920-735-4169
International FAX: 920-735-4125

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
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.

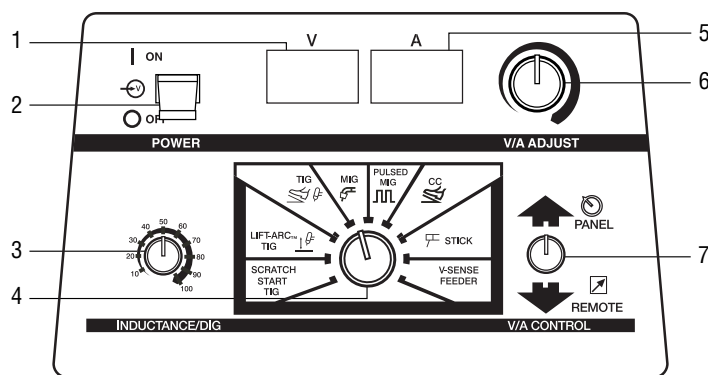
XMT® 304 CC/CV Control Panel

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).

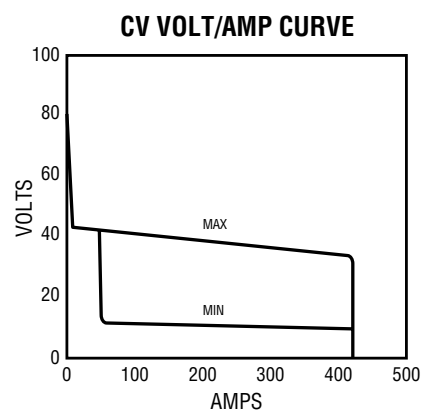
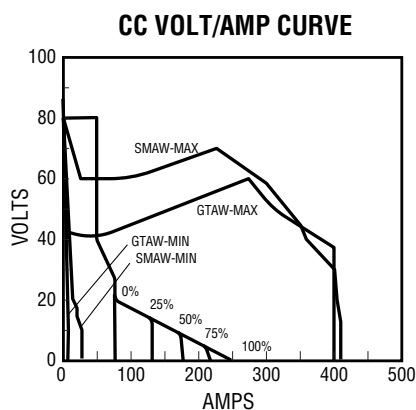
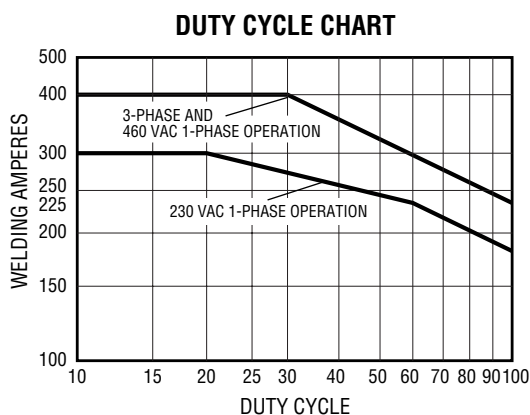
Ultra-tough, polycarbonate-blended cover for control panel protects front controls from damage.

International-style weld disconnects provide high-quality weld cable connections. (Two connectors supplied with each unit.)



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



XMT® 350 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, 208 V 230 V 400 V 460 V 575 V KVA KW								Dimensions H: 17 in (432 mm) W: 12-1/2 in (318 mm) D: 24 in (610 mm)	Weight CC/CV Model 80 lb (36.3 kg) VS Model 80 lb (36.3 kg)
Three-Phase	350 A at 34 VDC	10–38 V	5–425 A	75 VDC	40.4	36.1	20.6	17.8	14.1	14.2	13.6			
Single-Phase	300 A at 32 VDC	10–38 V	5–425 A	75 VDC	60.8	54.6	29.7	24.5	19.9	11.7	11.2			

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

XMT® 350 CC/CV and VS Control Panels

Additional Features

Available in CC/CV and VS models. Both models feature true CC/CV welding processes, but *VS model* does not include remote control receptacle.

Auto Remote Sense enables unit to automatically use remote control if connected to remote control receptacle (CC/CV models only).

Auto-Line™ Power Management Technology allows for any input voltage hook-up (208–575 V) with no manual linking required, providing convenience in any job setting. Ideal solution for dirty or unreliable input power.

Exceptional electrical efficiency. At 400 A, efficiency is 87.24%!

350 A of welding output at 60% duty cycle with superior low-end performance.

Power factor of .95 enables smaller fuses/breakers and primary wiring. Primary amperage draw at rated output is 25% less than the competition.

Low OCV Stick — A built-in, selectable feature, that reduces the Stick mode open-circuit voltage (OCV) to nearly 15 volts when the welding power source is not in use. Eliminates the need for add-on voltage reducers.

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

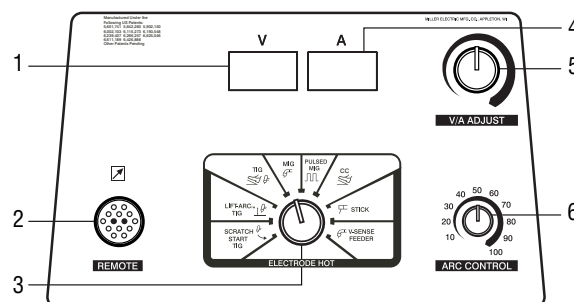
International-style weld disconnects provide high-quality weld cable connections. (Two connectors supplied with CC/CV unit.)

Optional gas solenoid for TIG welding.

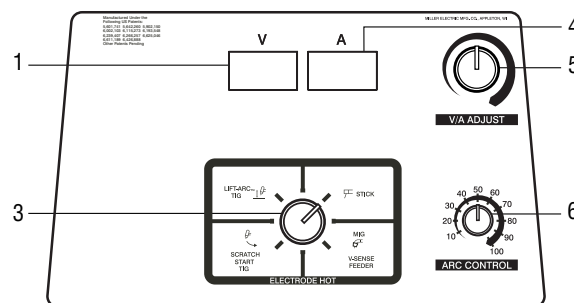
NOTE:
CC/CV model is equipped with Dinse-style output connector.

NOTE:
VS model is equipped with Tweco-style output connector.

XMT 350 CC/CV Model



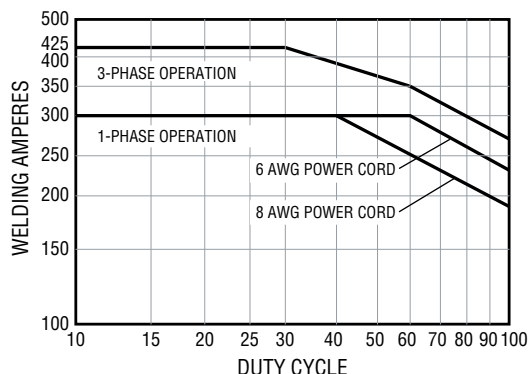
XMT 350 VS Model



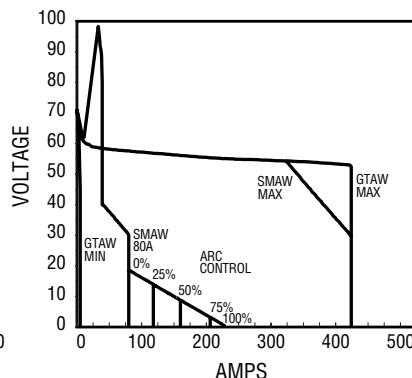
1. Voltmeter
2. Remote Control Receptacle (CC/CV model only)
3. Process Selector Switch (Rotary Switch)
4. Ammeter
5. Voltage/Amperage Adjustment Control
6. Arc Control

XMT® 350 Performance Data

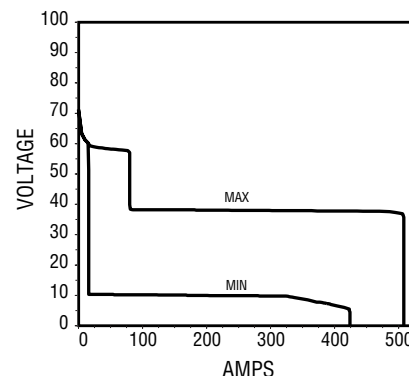
DUTY CYCLE CHART



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
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	230 V	400 V	460 V	575 V	KVA	KW	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.

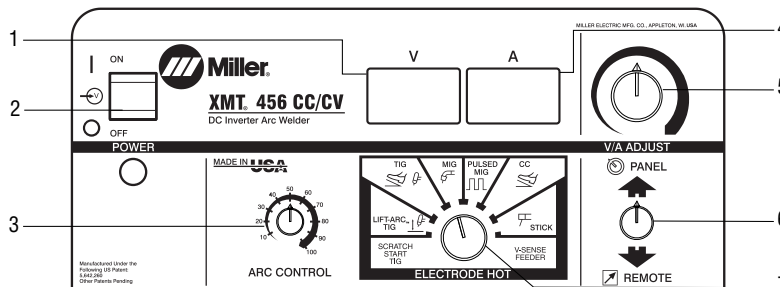
XMT® 456 CC/CV Control Panel

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!

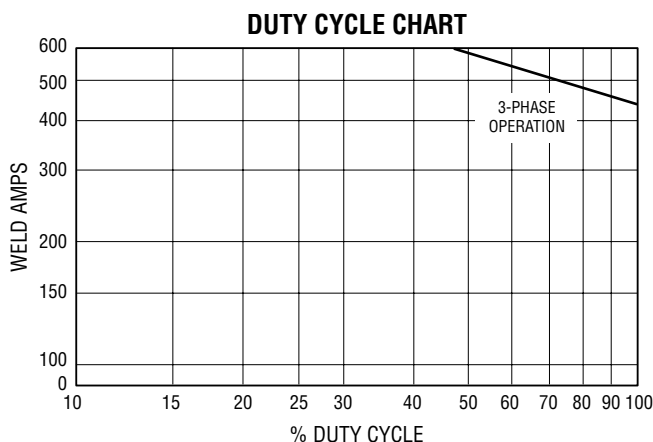
Optional remote on/off provides ability to turn power source on or off when it is located away from your work.



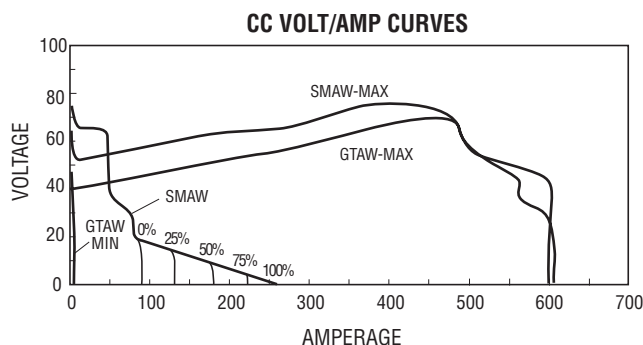
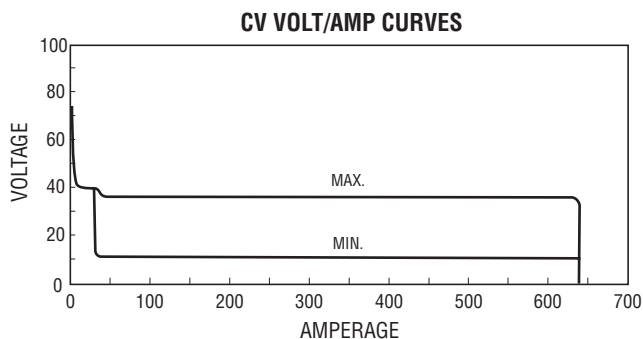
Note: XMT 456 is equipped with Stud for ring-lug output connections.

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



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



XMT® MIGRunner™ Components



XMT® 304 MIGRunner™ #907 061

XMT® 350 CC/CV MIGRunner™ #907 233

Comes Complete With:

- XMT 304 or 350 CC/CV power source
- 22A wire feeder
- Roughneck™ C-4015 gun
- Consumables
- .035 and .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)



XMT® 350 Python® MIGRunner™ Components



XMT® 350 CC/CV Python® MIGRunner™ #907 235

Comes Complete With:

- XMT 350 CC/CV power source
- XR Control
- 25 ft (7.6 m) Python® gun (air-cooled)
- Consumables (.035 and 3/64 in contact tips)
- Regulator/flow gauge with gas hose
- MIGRunner Cart with cylinder rack
- Bottom tray will hold optional Coolmate 3 (sold separately)

Python® is a registered trademark of MK Products, Irvine, CA USA



XMT® 350 XR™ -Edge MIGRunner™ Components



XMT® 350 CC/CV XR™-Edge MIGRunner™ #907 234



XMT® 350 CC/CV XR™-Edge PULSERunner™ #951 033

Comes Complete With:

- XMT 350 CC/CV power source
- XR-Control
- 30 ft (9 m) XR-A Edge gun (air-cooled)
- Consumables
- .035 and .047 in drive roll kit
- Regulator/flow gauge with gas hose
- MIGRunner Cart with cylinder rack
- Bottom tray will hold optional Coolmate 3 (sold separately)
- Optima Pulse control (PULSERunner #951 033 only)



Optima™ Pulse Control
(comes with
PULSERunner #951 033)

Genuine Miller Accessories



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 304/350 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.



PC-300 Pulsed TIG (DC GTAW) Control #042 297

For use with both inverter and non-inverter type power sources. Includes 8 ft (2.4 m) inter-connecting cord and 115 VAC 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.

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.



RFCS-14 Foot Control #043 554

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



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 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.



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.



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.

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.

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



304/350 Cart



XL Cart

MIGRunner™ Cart

#195 445 (For 304/350 models only)

MIGRunner™ XL Cart

#195 246 (For all models)

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 304/350 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™ 8VS #194 890
SuitCase™ 12VS #194 941

Lightweight, portable wire feeder for a variety of wires up to .062 in. Holds up to an 8 in (8VS) or 12in (12VS) spool of wire. Operates on open-circuit voltage eliminating the need for a control/power cord. See Lit. Index No. M/6.4.



SuitCase™ 8RC #194 938
SuitCase™ 12RC #194 940

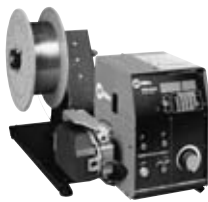
Lightweight, portable wire feeder for a variety of wires up to .062 in. Holds up to an 8 in (8RC) or 12in (12RC) spool of wire. Operates using 14-pin control receptacle. See Lit. Index No. M/6.5.



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



S-74 DX #195 059
Wire feeder features process and weld control and handles a variety of wires up to 1/8 in. See Lit. Index No. M/3.0.



60M Series
S-60M #131 794
D-60M #131 796
Semiautomatic pulsed-MIG and standard CV-MIG feeder equipped

with eight synergic pulse programs. Handles .023 to 1/8 in wires and up to 60 lb spool. Optional data cards for program storage and transfer. Pulse arc characteristics are fully customizable. See Lit. Index No. M/2.4.



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 for 14 pin.)

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.

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.

International-Style Connectors

Note: XMT 304/350 power sources are equipped with International-style connectors for secondary connections. (Power source is shipped with two 50-mm male International-style plugs for use with #1 or #2 AWG size cable.)



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 #1 or #2 AWG cable size. Required if male plugs shipped with power source must be replaced, or if additional plugs are needed.

#042 533 70 mm
Accepts #1/0 or #2/0 AWG cable size. Required if #1/0 or #2/0 AWG size cable is to be used.

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 #1 or #2 AWG size cable.
#042 534 70 mm
Accepts #1/0 or #2/0 AWG size cable.

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 #903 471-01-1 #903 473 #903 472	208-230/460 VAC with Auto-Link® 208-230/460 VAC with Auto-Link® and Auxiliary Power 460/575 VAC with Auto-Link® 400 VAC, 50/60 Hz with Auxiliary Power and CE		
XMT® 350 CC/CV	#907 161 #907 161-01-1 #907 161-01-2 #907 161-01-4	208–575 VAC with Auto-Line™ 208–575 VAC with Auto-Line™ and Auxiliary Power 230–460 VAC with Auto-Line™ and Auxiliary Power and CE 208–575 VAC with Auto-Line™ and Tweco connectors		
XMT® 350 VS	#907 224	208–575 VAC with Auto-Line™ (without 14-pin, Tweco connectors)		
XMT® 456 CC/CV	#907 010 #907 010-01-1 #907 011 #907 012	230/460 VAC 230/460 VAC with Remote On/Off 575 VAC 400 VAC with CE		
MIGRunner™ Packages		See page 5 for different packages and components		
PULSERunner™ Packages		See page 5 for different packages and components		
Inverter Racks (full or empty)		See Lit. Index No. DC/18.81		
Accessories				
Optima™ MIG Pulse Control	#043 389	For CC/CV models only		
Optima™ Extension Cords		See page 6		
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		
PC-300 Pulsed DC TIG Control	#042 297			
Process Selector Control	#042 872			
Gas Solenoid Kit	#195 286	For XMT 350 models only		
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 6. Not to be used with Optima, 60M or XR-M		
Running Gear				
MIGRunner™ Cart	#195 445	For XMT 304/350 models only		
MIGRunner™ XL Cart	#195 246	For all models		
XMT Cylinder Cart	#042 537	For all models		
Universal Carrying Cart and Cylinder Rack	#042 934	For XMT 304/350 models only		
Protective Cover	#195 478			
Wire Feeders/Guns				
SuitCase™ 8VS/12VS	#194 890/#194 941	See Lit. Index No. M/6.4		
SuitCase™ 8RC/12RC	#194 938/#194 940	See Lit. Index No. M/6.5		
XR Control	#181 538	See Lit. Index No. M/1.7		
S-74 DX	#195 059	See Lit. Index No. M/3.0		
60M Series	#131 794/#131 796	S-60M/D-60M. See Lit. Index No. M/2.4		
Spoolmatic® 30A Spool Gun	#130 831	Includes 30 ft (9.1 m) cable assembly		
Roughneck® C-Series MIG Guns		See Lit. Index No. AY/17.0		
Ironmate™ Flux Cored Guns		See Lit. Index No. AY/16.0		
Water Coolant Systems		See page 7. See Lit. Index No. AY/7.2		
International-Style Connectors		See page 7		

Date:

Total Quoted Price:

Distributed by:

