

XMT[®] 350 Series

Issued Jan. 2010 • Index No. DC/18.83

**Multiprocess Welding
Power Source** 

Quick Specs

Heavy Industrial Applications

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

Processes

MIG (GMAW)/Pulsed MIG (GMAW-P)*
Stick (SMAW)
TIG (GTAW)
Flux Cored (FCAW)
Air Carbon Arc Cutting and Gouging (CAC-A)
**XMT-350 MPa; XMT 350 CC/CV with
required optional control; not available with
XMT 350 VS model.*

Input Power Requires 3- or 1-Phase Power,
208–575 VAC, 50/60 Hz
Rated Output 10–38 V, 5–425 A
Weight Net: 80 lb (36.3 kg)
Ship: 89.1 lb (40.4 kg)

The Power of Blue.[®]



XMT 350 CC/CV

XMT 350 VS

XMT 350 MPa with
Built-In Pulse MIG
(see page 4)

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.

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

The XMT 350 Series is packed with features to meet the most demanding welding needs.

Please see page 2 to determine which model is right for your application.

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.

Inverter arc control technology provides greater puddle control for superior 6010 Stick electrode performance, and outstanding MIG weld performance.

Line voltage compensation keeps welding output constant even if input power varies by +/-10%. Line voltage compensation further expands to an amazing +37% and -59% when operating on 460 VAC.

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.



Power source is warranted for 3 years, parts and labor.
Original main power rectified parts are warranted for 5 years.
Gun warranted for 90 days, parts and labor.

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



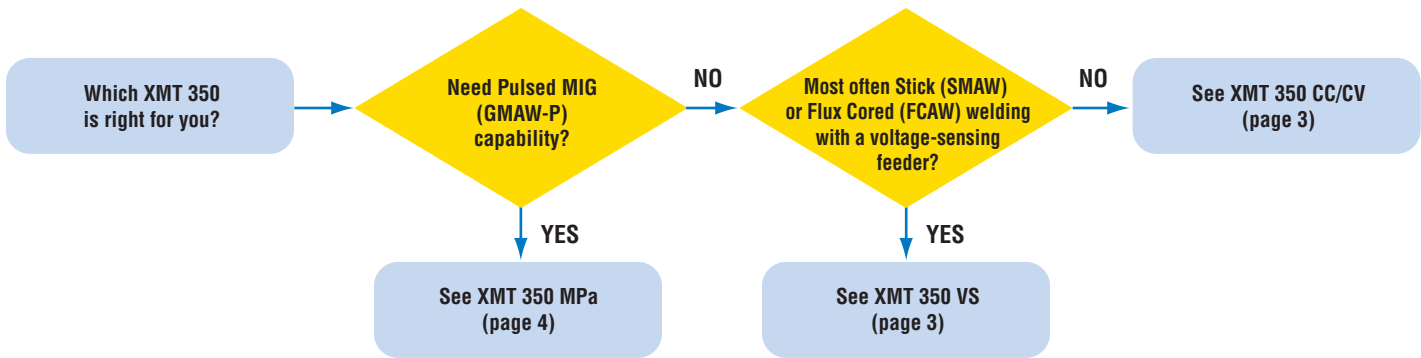
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An Illinois Tool Works Company
1635 West Spencer Street
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Web Site
www.MillerWelds.com



Which XMT® is Right for You?



Amperage Class*	Power Processing	Industrial Inverters	Remote Capability	Process Capability	Pulsed MIG Capability	Connectors	Auxiliary Power	For more Information
300 A	Auto-Link®	XMT 304 CC/CV, 230/460 VAC	Yes	Stick, DC TIG, MIG, CAC-A	Optima™ Pulse Control Required	Dinse only	Optional	Lit. No. DC/18.8
350 A	Auto-Line™	XMT 350 MPa, 208–575 VAC	Yes		Built-In	Dinse or Tweco	Optional	Page 4
		XMT 350 CC/CV, 208–575 VAC	Yes		Optima™ Pulse Control Required	Dinse or Tweco	Optional	Page 3
		XMT 350 VS, 208–575 VAC	No		No	Tweco only	No	Page 3
565 A	Manual	XMT 456 CC/CV, 230/460 VAC	Yes	Optima™ Pulse Control Required	Ring Lug only	Standard	Lit. No. DC/18.8	

*60% Duty Cycle Rating

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,								Dimensions	Weight
					208 V	230 V	400 V	460 V	575 V	KVA	KW			
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	H: 17 in (432 mm) W: 12-1/2 in (318 mm) D: 24 in (610 mm)	80 lb (36.3 kg)	
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.

Additional Features

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

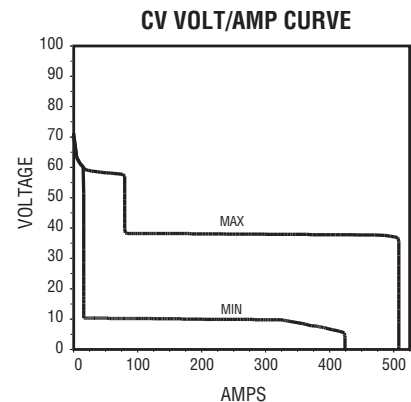
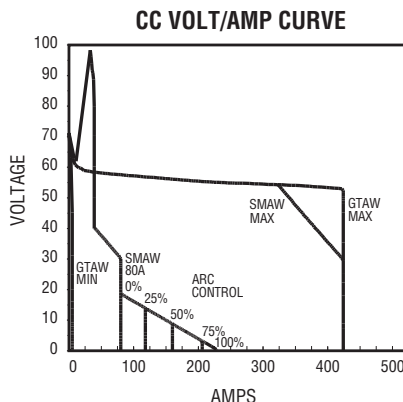
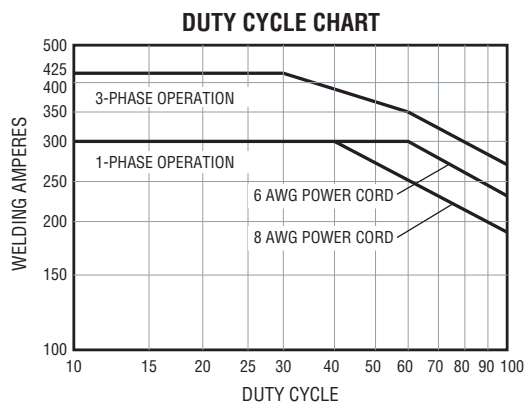
350 A of welding output at 60% duty cycle with superior low-end performance.

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

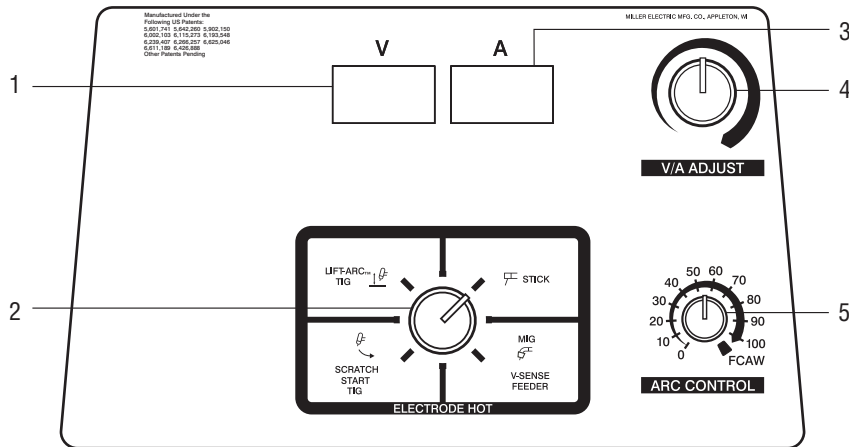
Ultra-tough, polycarbonate-blended cover for control panel protects front controls from damage.

Optional gas solenoid for TIG welding.

XMT® 350 Performance Data



XMT® 350 VS Control Panel



1. Voltmeter
2. Process Selector Switch (Rotary Switch)
3. Ammeter
4. Voltage/Amperage Adjustment Control
5. Arc Control (FCAW Setting for Flux Cored Welding)

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

Additional Features

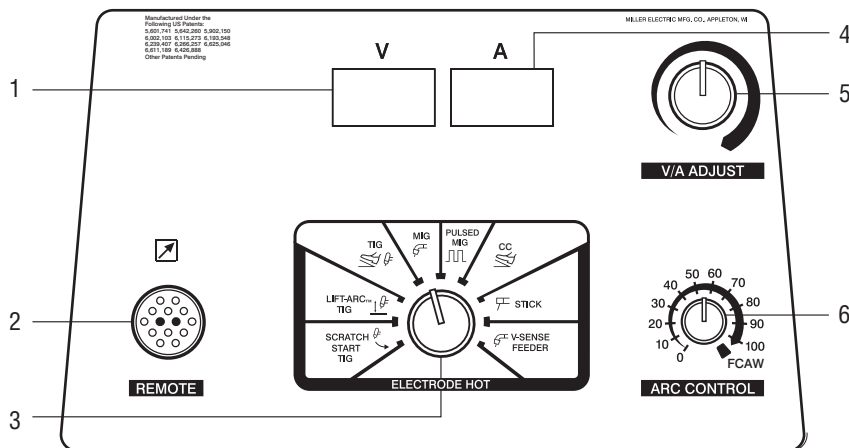
Low OCV Stick — A built-in, selectable feature, that reduces the Stick mode open-circuit voltage (OCV) to nearly 15 volts when the welding power source is not in use. Eliminates the need for add-on voltage reducers.

Note: VS model is available only with Tweco-style weld cable disconnects. Tweco cable connectors are not supplied with the unit and must be ordered separately.

Optional 115 VAC auxiliary power is not available on VS model.

Pulsed MIG (GMAW-P) capability is not available on VS model.

XMT® 350 CC/CV Control Panel



1. Voltmeter
2. Remote Control Receptacle
3. Process Selector Switch (Rotary Switch)
4. Ammeter
5. Voltage/Amperage Adjustment Control
6. Arc Control (FCAW Setting for Flux Cored Welding)

Additional Features

Auto Remote Sense™ enables unit to automatically use remote control if connected to remote control receptacle.

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.

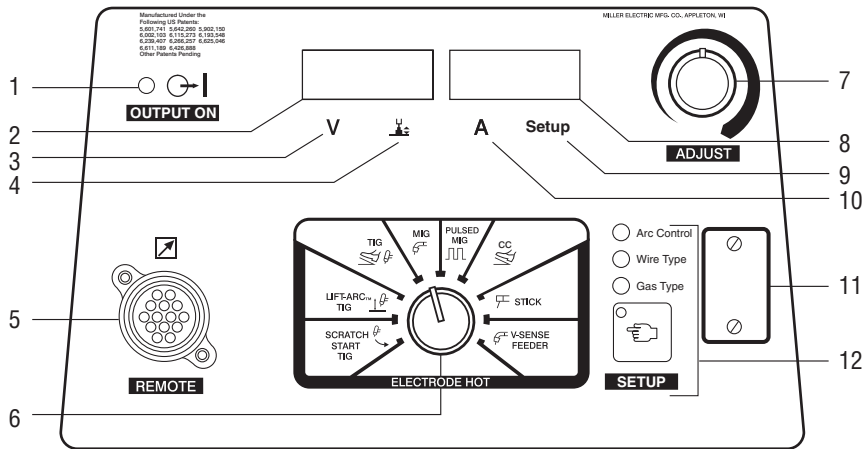
Dinse International-style weld disconnects provide high-quality weld cable connections. Dinse and Tweco connectors are available.

Optional 115 VAC auxiliary power provides 10 amps of circuit-breaker-protected power for water circulators, etc.

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

XMT® 350 MPa Control Panel

The simple, powerful XMT 350 MPa can handle almost any portable welding application. Add the S-74 MPa feeder for a synergic system that simplifies Pulsed MIG welding applications.



- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Output ON Indicator Light 2. Left Display 3. Voltage Display 4. Arc Length Indicator 5. Remote Control Receptacle 6. Process Selector Switch (Rotary Switch) 7. Adjustment Control 8. Right Display | <ol style="list-style-type: none"> 9. Setup Indicator 10. Amperage Indicator 11. Remote PC Interface <ul style="list-style-type: none"> • Arc Control Indicator • Wire Type Indicator • Gas Type Indicator 12. Setup Indicator Lights <ul style="list-style-type: none"> • Arc Control Indicator • Wire Type Indicator • Gas Type Indicator • Setup Button |
|---|---|

Built-In Pulsed MIG Programs

The XMT 350 MPa expands the process capability of an XMT 350 with built-in Pulsed MIG operation. See the table below for the wide range of Pulsed MIG (GMAW-P) welding applications the XMT 350 MPa can handle.

	Wire Types	Gas Types
Steel	.035 STL .045 STL	90% ARGN/10% CO ₂ (Argon/Carbon Dioxide) 95% ARGN/5% OXY (Argon/Oxygen)
Metal Core	.035 MCOR .045 MCOR .052 MCOR	90% ARGN/10% CO ₂ (Argon/Carbon Dioxide)
Stainless Steel	.035 SSTL .045 SSTL	TRI MIX (Tri-gas mixture: 81% ARGN/18% HE/1% CO ₂ [Argon/Helium/Carbon Dioxide]) 98% ARGN/2% OXY (Argon/Oxygen) 98% ARGN/2% CO ₂ (Argon/Carbon Dioxide)
Aluminum	.035 AL4X (4000 Series) 3/64 AL4X (4000 Series) .035 AL4X (5000 Series) 3/64 AL4X (5000 Series)	100% ARGN (Argon)
Nickel	.035 NI .045 NI	75% ARGN/25% HE (Argon/Helium)
Silicon Bronze	.035 SIBR	100% ARGN (Argon)
Copper Nickel	.045 CUNI	75% HE/25% ARGN (Helium/Argon)

MPa

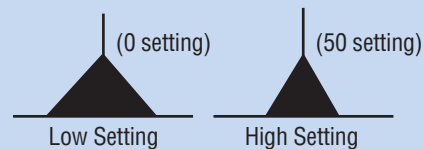
MPa: M (MIG), P (Pulse), a (Advanced Arc Control). Advanced arc control enables an improved pulse welding arc. The operator has more control over puddle and bead characteristics using SharpArc™. In addition, the unit provides a more robust and stable arc at very low arc length, reducing heat input, and providing the ability to weld on a wider range of material thickness.

What are some benefits of Synergic-Pulsed MIG?

1. Easy to Setup
2. No more changing wire speed and then having to go back to reset the weld output.

SharpArc™

SharpArc controls welding arc cone width in Pulsed MIG (GMAW-P) welding mode.



If a gas is used other than what is listed on the Pulsed MIG welding program chart (below left), the SharpArc™ can be adjusted to help customize your arc to the gas being used.

Lower SharpArc™ settings widen the arc cone, increase puddle fluidity and flattens the weld bead.

Additional Features

Auto Remote Sense™ enables unit to automatically use remote control if connected to remote control receptacle.

Dinse International-style weld disconnects provide high-quality weld cable connections. Dinse and Tweco connectors are available.

Optional 115 VAC auxiliary power provides 10 amps of circuit-breaker-protected power for water circulators, etc.



Synergic Pulsed MIG — The S-74 MPa feeder for steel gives you the benefit of a Synergic Pulsed MIG system. As you increase/decrease the wire feed speed, the pulse parameters increase/decrease, matching the right amount of power output to match the wire speed.

XMT® 350 Wire Feeder Packages



**SuitCase® X-TREME™ 8VS
with XMT® 350 VS and Bernard®
Q300 gun #951 306**

Pulse MIG	Stick MIG TIG	Remote Control Cable	Feeder Remote Control	Weight w/ steel wire
No	Yes	No	No	32 lb



**SuitCase® X-TREME™ 12VS
with XMT® 350 CC/CV and Bernard®
Q300 gun #951 305**

Pulse MIG	Stick MIG TIG	Remote Control Cable	Feeder Remote Control	Weight w/ steel wire
No	Yes	No	No	66 lb



**SuitCase® 8RC with XMT® 350 MPa
and Bernard® Q300 gun #951 307**

Pulse MIG	Stick MIG TIG	Remote Control Cable	Feeder Remote Control	Weight w/ steel wire
Yes	Yes	Yes	Yes	32 lb



**SuitCase® 12RC with XMT® 350 MPa
and Bernard® Q300 gun #951 309**

Pulse MIG	Stick MIG TIG	Remote Control Cable	Feeder Remote Control	Weight w/ steel wire
Yes	Yes	Yes	Yes	66 lb



**SuitCase® X-TREME™ 8VS
with XMT® 350 MPa and Bernard®
Q300 gun #951 308**

Pulse MIG	Stick MIG TIG	Remote Control Cable	Feeder Remote Control	Weight w/ steel wire
Yes	Yes	No	No	32 lb



**SuitCase® X-TREME™ 12VS
with XMT® 350 MPa and Bernard®
Q300 gun #951 310**

Pulse MIG	Stick MIG TIG	Remote Control Cable	Feeder Remote Control	Weight w/ steel wire
Yes	Yes	No	No	66 lb



XMT® 350 CC/CV, 22A, MIGRunner™ #951 313

Comes Complete With:

- XMT 350 CC/CV power source
- 22A wire feeder
- Bernard® Q™-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)

**XMT® 350 CC/CV S-74D MIGRunner™
#951 314 (not shown)**

Comes Complete With:

- XMT 350 CC/CV power source
- S-74D wire feeder
- Bernard® Q™-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



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. (Not for use with XMT 350 MPa or VS models.)

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.

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.

Gas Solenoid Kit #195 286

Easy to install, optional gas solenoid kit for TIG welding applications. Kit only works with XMT 350.



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



MIGRunner™ Cart #195 445

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

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

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.

Genuine Miller Accessories (continued)

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
S-74 MPa #951 293
Wire feeder features Posifeed™ wire drive assembly and handles a variety of wires up to 1/8 in. 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.

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 350 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® 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® 350 MPa	#907 366 #907 366-01-1 #907 366-00-2 #907 366-01-4	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 Wire Feeder Packages		See page 5		
Inverter Racks (full or empty)		See Lit. Index No. DC/18.81		
Accessories				
Optima™ MIG Pulse Control	#043 389	For CC/CV models only. Not for use with XMT 350 MPa or VS.		
Optima™ Extension Cords		See page 6		
WC-24 Weld Control	#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		
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			
Running Gear Cylinder Rack	#300 408	For dual feeders		
XMT Cylinder Cart	#042 537			
Universal Carrying Cart and Cylinder Rack	#042 934			
Protective Cover	#195 478			
Wire Feeders/Guns				
SuitCase® X-TREME 8VS/X-TREME™ 12VS	#951 181 / #951 184	See Lit. Index No. M/6.4 and 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 #951 198 #951 200 #951 293	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 S-74 MPa. Designed exclusively for XMT/Invision 350 MPa for Synergic Pulsed MIG		
Spoolmatic® 30A Spool Gun	#130 831	Requires WC-24 for use with 14-pin receptacles		
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:



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