

XR-Aluma-Pro™

Gooseneck-Style Push-Pull Gun

**MIG Gun for
Aluminum Welding** 

Quick Specs

Heavy Industrial Applications

Emergency Vehicles
Recreational Vehicles
Trucks and Trailers
Heat Exchangers
Sign Manufacturers

Shipbuilding
Tool Boxes
Railcars
Fabrication

Processes

MIG (GMAW)
Pulsed MIG
(GMAW-P)
with pulsing
power source

Wire Types

Aluminum
Stainless Steel
Cored (Gas-shielded)

Rated Output at 100% Duty Cycle

Air-Cooled: 300 A
Water-Cooled: 400 A

Net Weight (Gun Only)

Air-Cooled: 2.5 lb. (1.1 kg)
Water-Cooled: 2.9 lb. (1.3 kg)



The industry's
most reliable
line of push-pull
welding guns.



The XR-Aluma-Pro is designed to be used with the XR™-S/D Control, Millermatic® 350P Aluminum or XR-AlumaFeed™ as part of a push-pull system.

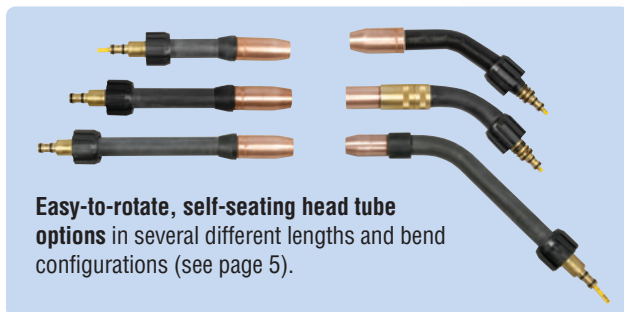
The XR-Aluma-Pro gun is available in air- or water-cooled versions with 15-, 25- or 35-foot (4.6, 7.6 or 10.6 m) cable lengths.

The XR-Aluma-Pro air-cooled gun offers 300 amps—more amperage than the competition can handle.

Aluminum-series-specific tension settings ensure smooth wire feeding performance with 4000 or 5000 series aluminum wires.

At 900 inches per minute, this gun will feed wire faster than any of its predecessors. (Dependent on feeder used.)

3-3/4 turn potentiometer provides better resolution when selecting the right wire speed for the job. The recessed WFS (wire feed speed) control offers durability yet is easy to use while wearing welding gloves.



Easy-to-rotate, self-seating head tube options in several different lengths and bend configurations (see page 5).



Replaceable feed cable liner is designed to provide consistent arc performance. It also reduces parts cost and service time by allowing a simple means of removing and replacing liner and not the complete feed cable.

Serviceability. This gun features a full-length Velcro®-seamed leather jacket with integrated strain reliefs for easy cable maintenance and protection. The gun also features quick connectors between the control cable and electrical components (trigger, motor, potentiometer).

Isolated, common, knurled drive roll helps reduce wear, reducing downtime and cost. Gun feeds .030–3/64 inch right out of the box without need for separate drive rolls. Kit #230 708 is required to run 1/16-inch (1.6 mm) wire.

Easy access to drive assembly and removable head tube reduces service time. Pressure release lever allows drive rolls to be held open for wire changeover.



Guns are warranted for 1 year, parts and labor.



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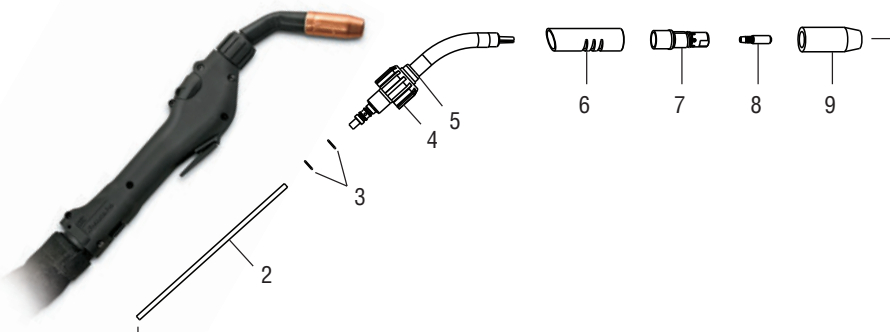
Specifications (Subject to change without notice.)



Model	Welding Current Rating	Wire Feed Speed	Wire Diameter Capacity	Dimensions	Net Weight (Gun only)
XR-Aluma-Pro™ (air-cooled)	300 A at 100% duty cycle	70–900 IPM (1.8–23 m/min.) dependent on control box or Millermatic® used	.030–1/16 in. (0.8–1.6 mm) aluminum wire Wire kit #230 708 required to run 1/16-in. (1.6 mm) wire	H: 5 in. (127 mm) W: 2.5 in (64 mm) D: 17 in. (432 mm)	2.5 lb. (1.1 kg)
XR-Aluma-Pro™ (water-cooled)	400 A at 100% duty cycle				2.9 lb. (1.3 kg)

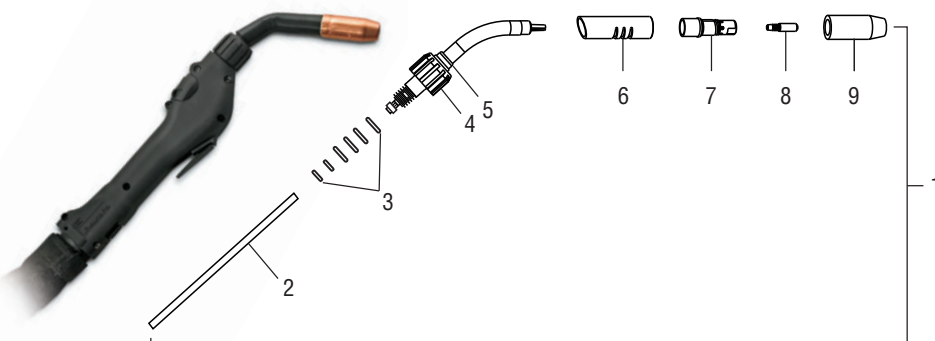
Parts Breakdowns

Air-Cooled XR-Aluma-Pro



1. Air-Cooled Assembly
Short Head Tube, 4 in. **#231 519**
Long Head Tube, 6 in. **#231 518***
 2. Head Tube Liner (See page 3 chart)
 3. Head Tube O-Rings **#230 969**
 4. Lock Nut **#227 168**
 5. Insulator Ring Rear **#227 416**
 6. Outer Insulating Jacket
Short **#227 159**
Long **#229 673**
 7. Gas Diffuser **#229 670**
 8. FasTip™ Contact Tip (See page 3 chart)
 9. Nozzle **#198 855**
- *Optional*

Water-Cooled XR-Aluma-Pro



1. Water-Cooled Assembly
Long Head Tube, 6 in. **#231 517**
2. Head Tube Liner (See page 3 chart)
3. Head Tube O-Rings **#230 970**
4. Lock Nut **#229 889**
5. Insulator Ring Rear **#227 416**
6. Outer Insulating Jacket **#230 420**
7. Gas Diffuser **#229 670**
8. FasTip™ Contact Tip (See page 3 chart)
9. Nozzle **#199 618**

Standard Replacement Consumables (Order from Miller Service Parts.)

Aluminum Wire Size	FasTip Contact Tip (Qty. 25)	Drive Rolls	Idler Rolls	Inlet Guides	Air-Cooled Head Tube Liner Short Barrel 4 in. (102 mm)	Air- and Water-Cooled Head Tube Liner Long Barrel 6 in. (152 mm)
.030 in. (0.8 mm)	#206 186 .041-in. ID	#227 434	#227 439	#227 408	#227 161	#229 674
.035 in. (0.9 mm)	#206 187 .047-in. ID	#227 434	#227 439	#227 408	#227 161	#229 674
.040 in. (1.0 mm)	#206 188 .053-in. ID	#227 434	#227 439	#227 408	#227 161	#229 674
3/64 in. (1.2 mm)	#206 189 .061-in. ID	#227 434	#227 439	#227 408	#230 239	#229 431
1/16 in. (1.6 mm)	#206 191 .071-in. ID	#227 434	#230 710	#230 711	#230 239	#229 431

Cable Liners	
#229 887	15 ft. (4.6 m)
#229 891	25 ft. (7.6 m)
#232 321	35 ft. (10.6 m)

Standard Consumables—FasTip™ Series (Order from Miller Service Parts.)

Gas Diffusers



#229 670 Standard
1/8-inch tip recess for heavy-duty FasTip™ contact tips.

#230 678
1/4-inch tip recess for heavy-duty FasTip™ contact tips.

#230 679
Flush tip for heavy-duty FasTip™ contact tips.

FasTip Contact Tips (25 per package)



Heavy-Duty (Aluminum Wire)

#206 186 .030 in. (0.8 mm)
#206 187 .035 in. (0.9 mm)
#206 188 .040 in. (1.0 mm)
#206 189 3/64 in. (1.2 mm)
#206 191 1/16 in. (1.6 mm)

Tapered (Aluminum Wire)

#209 026 .030 in. (0.8 mm)
#209 027 .035 in. (0.9 mm)
#209 029 3/64 in. (1.2 mm)
#209 030 1/16 in. (1.6 mm)

Nozzles

Screw-On Brass

#199 610 1/2-in. orifice, tapered
#199 611 3/4-in. orifice, straight
#199 612 3/4-in. orifice, straight HD
#199 613 5/8-in. orifice, tapered
#199 614 5/8-in. orifice, tapered HD

Screw-On Copper

#199 615 1/2-in. orifice, tapered
#199 616 3/4-in. orifice, straight
#199 617 3/4-in. orifice, straight HD
#198 855 5/8-in. orifice, tapered
#199 618 5/8-in. orifice, tapered HD
#207 313 5/8-in. orifice, tapered 15/16 OD
#209 035 3/8-in. orifice, tapered
#209 036 1/2-in. orifice, tapered

Optional Consumables—Centerfire™ Series (Order from Miller Service Parts.)

Insulator 10012
4323R

Diffuser D-1AP (large)
DS-1AP (small)

XR-Aluma-Pro™ Diffuser Conversion Kits for .035–1/16 in aluminum

#230 669 For D-1AP diffuser

#230 670 For DS-1AP diffuser

Diffuser kits must be used to convert to Centerfire™ Series consumables. Kit includes diffuser and head tube liners.

Aluminum-Specific T Series Contact Tips

T-035AL .035 in. (0.9 mm)

T-047AL .047 in. (1.2 mm)

T-062AL 1/16 in. (1.6 mm)

Large Nozzles

N-3414C Copper, 3/4-in. I.D.,
1/4-in. tip recess

N-3418B Brass, 3/4-in. I.D.,
1/8-in. tip recess

N-3414B Brass, 3/4-in. I.D.,
1/4-in. tip recess

N-5814C Copper, 5/8-in. I.D.,
1/4-in. tip recess

N-5818B Brass, 5/8-in. I.D.,
1/8-in. tip recess

N-5814B Brass, 5/8-in. I.D.,
1/4-in. tip recess

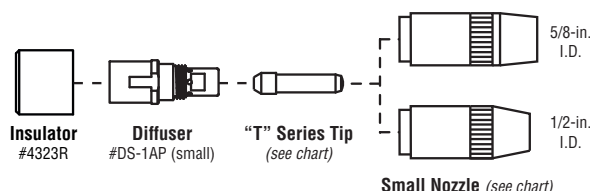
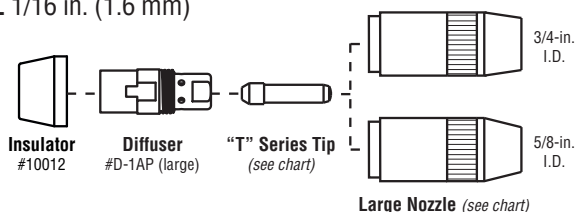
Small Nozzles

NS-5818B Brass, 5/8-in. I.D.,
1/8-in. tip recess

NS-1218B Brass, 1/2-in. I.D.,
1/8-in. tip recess

NS-1200B Brass, 1/2-in. I.D.,
flush tip

NST-3818B Brass, 3/8-in. I.D.,
1/8-in. tip recess



Optional Head Tube Assemblies (Order from Miller Service Parts.)



45 Degree/4 Inch
#255 037 Air-Cooled
#255 338 Water-Cooled



45 Degree/6 Inch
#255 040 Air-Cooled
#231 517 Water-Cooled
 (standard on XR-Aluma-Pro™)



60 Degree/4 Inch
#231 519 Air-Cooled
 (standard on XR-Aluma-Pro™)
#255 038 Water-Cooled



60 Degree/6 Inch
#231 518 Air-Cooled
#255 041 Water-Cooled



180 Degree/4 Inch
 (standard on XR™-Pistol Pro)
#255 716 Air-Cooled
#255 717 Water-Cooled



180 Degree/6 Inch
#258 476 Air-Cooled
#258 477 Water-Cooled



180 Degree/8 Inch
#255 042 Air-Cooled
#255 043 Water-Cooled



**45 Degree/10 Inch
 Tight Access**
#258 295 Air-Cooled
 For hard-to-reach welds
 where a smaller nozzle
 and longer reach is needed.



Flex Neck/10 Inch
#267 517 Air-Cooled
 Ideal for hard-to-reach welds.



**45 Degree/6 Inch
 with Centerfire™**
#246 205 Water-Cooled
 (standard on XR-Aluma-Pro™ Plus)
60 Degree/6 Inch with Centerfire™
#246 301 Air-Cooled



180 Degree/4 Inch with Centerfire™
 (standard on XR™-Pistol Plus)
#258 474 Air-Cooled
#258 475 Water-Cooled

Heavy-Duty Head Tube Assemblies

For high-duty-cycle applications.



**45 Degree/6 Inch
 Heavy-Duty**
#262 206 Air-Cooled
#258 293 Water-Cooled



60 Degree/6 Inch Heavy-Duty
#262 207 Air-Cooled
#258 294 Water-Cooled



180 Degree/6 Inch Heavy-Duty
#262 208 Air-Cooled
#259 535 Water-Cooled

Liners for Optional Head Tube Assemblies (Order from Miller Service Parts.)

Fastip™ Liners (4-inch assemblies)

#227 161 .030–.040 in. (0.8–1.0 mm)
 #230 239 3/64 and 1/16 in. (1.2 and 1.6 mm)

Fastip Liners (6-inch assemblies)

#229 674 .030–.040 in. (0.8–1.0 mm)
 #229 431 3/64 and 1/16 in. (1.2 and 1.6 mm)

Fastip Liners (8-inch assemblies)

M1434 .030–.040 in. (0.8–1.0 mm)
 M1435 3/64 and 1/16 in. (1.2 and 1.6 mm)

Bernard™ Quik Tip™ Tight-Access Liners (10-inch assemblies)

M1428 .030–.040 in. (0.8–1.0 mm)
 M1429 3/64 and 1/16 in. (1.2 and 1.6 mm)

Fastip Liners (6-inch heavy-duty water-cooled assemblies)

M1425 .030–.040 in. (0.8–1.0 mm)
 M1426 3/64 and 1/16 in. (1.2 and 1.6 mm)

Phosphorous Bronze Liners (heavy-duty water-cooled assemblies)

M1436 .030–1/16 in. (0.8–1.6 mm)
 (6-inch)



Universal Teflon® Liner Kit

#262 707 .030–.040 in. (0.8–1.0 mm)
 black liners
 #262 705 3/64 and 1/16 in. (1.2 and 1.6 mm)
 yellow liners

Includes five 14-inch liners and cutter. Liners can be cut to correct length for any pistol or gooseneck-style gun. Cutter provides a straight, clean cut to reduce shaving and feeding problems.

Teflon® Liner Cutter #258 863

Genuine Miller® Accessories

XR-AlumaFeed™ Remote Connector Kit

#300 898 Field
 Required for use with remote option guns.

Leather Cable Cover

#234 109 15 ft. (4.6 m)
 #234 110 25 ft. (7.6 m)
 #234 111 35 ft. (10.6 m)
 Protects gun hose and cable assembly from wear and abrasion. Features full-length hook-and-loop closure for ease of maintenance or replacement.

Short Leather Gun Cover #234 416

Cover is 17 inches (432 mm).



50-Degree Curved Nozzle Kit-A #264 064

(Order from Miller Service Parts.)
 Directly attaches to XR-Aluma-Pro or XR-Pistol-Pro for access to confined weld joint areas. Used with .030–1/16 inch (0.8–1.6 mm) wire. Kit includes two of each size contact tip to accommodate all wire sizes, nozzle adapter kit and curved nozzle. Uses standard straight head tube liner.

Replacement Contact Tips for 50-Degree Curved Nozzle

(Order from Miller Service Parts.)
 #148 155 .030- and .035-in.
 (0.8 and 0.9 mm) wire
 #148 154 .047-in. (1.2 mm) wire
 #148 156 1/16-in. (1.6 mm) wire

50-Degree Curved Nozzle Insulator Kit #264 066

(Order from Miller Service Parts.)
 Sleeve goes over center of curved nozzle to protect operator from heat. For use with 50-Degree Curved Nozzle Kit-A above.

1/16-Inch (1.6 mm) Wire Kit #230 708

Specially designed for 1/16-inch wire. Includes idler roll, head tube liner and inlet guide. Required when running 1/16-inch wires. Not included with standard XR-Pistol-Pro gun.

Hardwire Liner Kit for Steel and Stainless

#198 377 For 15-, 25-, or 35-ft. guns
 (4.6, 7.6 or 10.6 m)
 Kit consists of a gun head tube liner (#233 998 listed below) and feed cable liner. Recommend using .030–.045 inch mild steel, or stainless steel electrode wire.
Note: .052- and 1/16-inch wires not recommended.

Phosphorous Bronze Liner

#233 999 Long Head Tube (air or water)
 #233 998 Short Head Tube (air only)
 For use with Hardwire Liner Kit above when used in XR-Aluma-Pro gun.

Wire Feeders and System Packages



XR-AlumaFeed™ Wire Feeder #300 509

Advanced push-pull wire feeder designed for high-volume, high-production aluminum MIG welding where quality and consistency is a high priority. See Lit. Index No. DC/34.



XR™-S Control #300 601

XR™-D Control #300 687

The updated XR Controls offer unsurpassed performance and reliability for feeding aluminum and other difficult-to-feed wire types. Models include .035-inch and factory-installed 3/64-inch drive rolls. See Lit. Index No. M/1.7.



AlumaFeed™ Synergic Aluminum Welding System #951 147

Includes XR-AlumaFeed push-pull wire feeder with drive rolls, AlumaPower™ 350 MPa synergic power source, and 25-foot (7.6 m) air-cooled XR-Aluma-Pro gun with contact tips, drive rolls and liners. Other system packages available.



Milleratic® 350P Aluminum/XR™-Aluma-Pro System (Air-Cooled) #951 452 200(208)/230/460 V

Includes Milleratic 350P Aluminum, 25-foot XR-Aluma-Pro push-pull gun, .035- and 3/64-inch FasTip™ contact tips, and .035- and 3/64-inch reversible U-groove drive rolls. (MIG gun not included.)

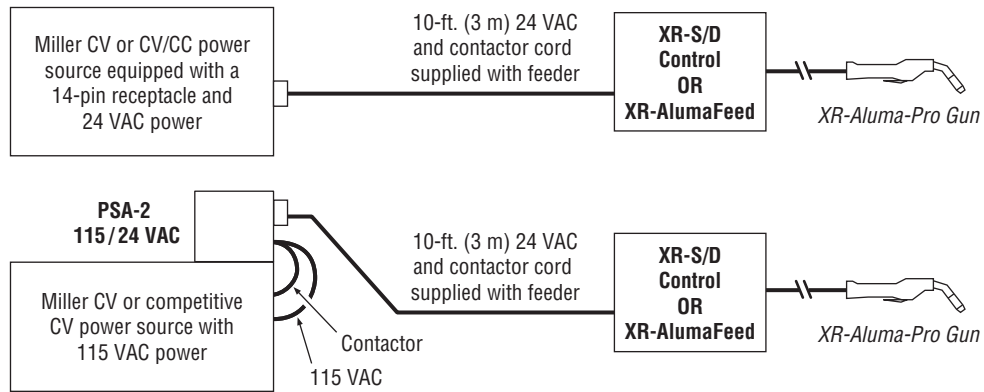


AlumaFeed™ MIGRunner™ Package #951 151

Includes the same as #951 147, plus MIGRunner Cart and Industrial MIG 4/0 Kit with Dinse connector. Other system packages available.

Typical Installations

Note: Cords and cables are supplied unless noted otherwise on drawings below. Refer to Owner's Manual for complete installation instructions.



XR-Aluma-Pro™ Gun Hook-Up Recommendations

CV Power Supply	Control
Millermatic® 252, 350P, 350P Aluminum	Direct Hook-Up
AlumaPower™ 350 MPa, 450 MPa Deltaweld® Series Dimension™ Series Invision™ Series XMT® Series (except VS model) Big Blue® 300, 350 PipePro® Trailblazer® 275, 325, 302 Air Pak™	XR™-S/D Control or XR-AlumaFeed™

Note: XR-Aluma-Pro guns are not compatible with 74MPa Plus feeders.

Ordering Information

XR-Aluma-Pro guns require the following:

- XR-S/D Control OR
XR-AlumaFeed (See at right.)
- Recommended Miller 14-pin power source (See list below.)
OR
- Millermatic 252, 350P, or 350P Aluminum
(See Lit. Index No. DC/12.49, DC/12.51 or DC/12.56.)

Important notes:

XR-Aluma-Pro guns with remotes are not compatible with XR-S/D Control and Millermatic models.

XR-Aluma-Pro guns are not compatible with 74MPa Plus feeders.

XR-Control must be serial #KK309906 or higher to be used with products and descriptions mentioned in this literature. To confirm a product's compatibility with older equipment, please contact the factory at 1-920-735-4505.

Recommended Power Sources

AlumaPower™ MPa
See literature no. DC/34
(For synergic use with AlumaFeed™)
Deltaweld® Series
See literature no. DC/16.2
XMT® 350/450
See literature no. DC/18.83
Invision™ MPa
See literature no. DC/23.5
Trailblazer® 275/325
See literature no. ED/4.75
Big Blue® 800 Duo Air Pak™
See literature no. ED/13.0

Note: Other power sources may be used.

Equipment	Stock No.	Description	Qty.	Price
XR-Aluma-Pro™ Gun (Air-Cooled)	#300 000	15-ft. (4.6 m) cable		
	#300 001	25-ft. (7.6 m) cable		
	#300 264	35-ft. (10.6 m) cable		
XR-Aluma-Pro™ Gun (Water-Cooled)	#300 003	15-ft. (4.6 m) cable		
	#300 004	25-ft. (7.6 m) cable		
	#300 265	35-ft. (10.6 m) cable		
XR-Aluma-Pro™ Gun with Remote (Air-Cooled)	#300 000 002	15-ft. (4.6 m) cable	Remote guns ONLY work with XR-AlumaFeed wire feeder with remote option (#300 509 001), or with XR-AlumaFeed with remote kit (#300 898) installed.	
	#300 001 002	25-ft. (7.6 m) cable		
	#300 264 002	35-ft. (10.6 m) cable		
XR-Aluma-Pro™ Gun with Remote (Water-Cooled)	#300 003 002	15-ft. (4.6 m) cable		
	#300 004 002	25-ft. (7.6 m) cable		
	#300 265 002	35-ft. (10.6 m) cable		
Wire Feeders and System Packages				
XR-AlumaFeed™ (See Lit. No. DC/34)	#300 509	Advanced model includes .035- and 3/64-in. drive rolls, and adds Profile Pulse™, synergic control, trigger schedule select, lock capabilities and flowmeter		
XR-AlumaFeed™ w/Remote Connector (See Lit. No. DC/34)	#300 509 001			
XR-AlumaFeed™ Synergic Aluminum Welding System (Air-Cooled) (See Lit. No. DC/34)	#951 147	Includes XR-AlumaFeed feeder #300 509, AlumaPower™ 350 MPa power source, and 25-ft. air-cooled XR-Aluma-Pro gun		
XR-AlumaFeed™ MIGRunner™ Package (Air-Cooled) (See Lit. No. DC/34)	#951 151	Includes the same as #951 147, plus MIGRunner cart and industrial MIG 4/0 kit with Dinse connector		
XR™-S Control (See Lit. No. M/1.7)	#300 601	Standard model includes .035- and 3/64-in. drive rolls, wire feed speed digital display, jog/purge, run-in control, and trigger hold		
XR™-D Control (See Lit. No. M/1.7)	#300 687	Enhanced model includes .035- and 3/64-in. drive rolls, has same features as XR-S, plus advanced digital and programming capabilities		
Millermatic® 350P Aluminum/ XR-Aluma-Pro System (Air-Cooled) (See Lit. No. DC/12.56)	#951 452	200(208)/230/460 V. True torque motor push-pull system. Note: The Millermatic® 350P Aluminum is compatible only with push-pull guns — not standard MIG guns		
Consumables and Accessories				
Consumables		See page 3		
Optional Head Tube Assemblies		See page 4		
Liners for Opt. Head Tube Assemblies		See page 5		
XR-AlumaFeed Remote Connector Kit	#300 898	Field. Required for use with remote option guns		
Leather Cable Cover	#234 109	15 ft. (4.6 m)		
	#234 110	25 ft. (7.6 m)		
	#234 111	35 ft. (10.6 m)		
Short Leather Gun Cover	#234 416	17 in. (432 mm)		
50-Degree Curved Nozzle Kit-A	#264 064			
Replacement Contact Tips for Curved Nozzle		See page 5		
50-Degree Curved Nozzle Insulator Kit	#264 066	For use with 50-Degree Curved Nozzle Kit-A		
1/16-Inch (1.6 mm) Wire Kit	#230 708	Required when running 1/16-inch wire		
Hardwire Liner Kit for Steel and Stainless	#198 377			
Phosphorous Bronze Liners		See page 5		
Coolant Systems		See Lit. Index No. AY/7.2		

Date:

Total Quoted Price:

Distributed by:

