

# Millermatic® 350P Aluminum

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MIG Welding Power Source,  
Wire Feeder and Gun Package



## Quick Specs

### Industrial Applications

Boat, Ship and Yacht Building  
Recreational Vehicles  
Trucks and Trailer  
Sign Manufacturers  
Emergency Vehicles

### Processes

MIG (GMAW)  
Synergic MIG (GMAW)  
Synergic Pulsed MIG  
(GMAW-P)

**Rated Output** 300 A at 32 VDC, 60% Duty Cycle, 60 Hz,  
1- or 3-Phase Input Power

**Amperage Range** 25–400 A

**Wire Feed Speed** 50–800 IPM (1.3–20 m/min.) with Push-Pull Gun

**Weight** 181 lb. (82 kg)

## The Power of Blue.®

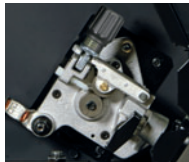
### Superior aluminum performance.

Direct connection for Miller 10-pin XR-Aluma-Pro™ and XR™ Pistol Grip air-cooled push-pull guns. With **Auto Gun Detect**, simply pull the trigger for the gun to be used and you're ready to weld.

*Note: Not compatible with standard MIG guns.*

### NEW! True torque feed motor push-pull design

provides continuous push force to the wire while the gun motor controls the speed at the gun. The motors work together to provide accurate and positive wire feed speed without wire shaving or deformation.



**Synergic pulsed welding** mode offers the simplicity of single-knob control. The machine will select the correct pulse power based on the wire feed speed (WFS) set by the operator.

**NEW! Synergic MIG** provides communication between power source, feeder and gun. As wire speed increases/decreases, the arc voltage also increases/decreases to maintain a constant welding arc.

**NEW! Trigger schedule select (SCHD)** allows the operator to select the alternative schedule by quickly tapping the gun trigger when not welding. Useful when switching between two welding parameters is needed.



**New!**

### Standard System Comes Complete with:

- Power source
- 10-ft. (3 m) industrial power cord (without plug)
- 10-ft. (3 m) work cable with clamp
- Factory-installed gas solenoid
- Smith® Argon mix regulator/flow gauge with hose
- Factory-installed, low-mounted running gear/cylinder rack
- .035-, .040-, and .047-in. (0.9, 1.0 and 1.2 mm) U-groove drive rolls for aluminum welding
- Setup and operation CD

### Special features

- Run-in adjustment for better starts
- Built-in two-minute spot timer
- Pre-flow and post-flow adjustment
- View actual welding amperage/voltage during welding, and five seconds after arc has shutdown
- SharpArc™ controls welding arc cone width in pulsed MIG welding mode
- Inductance control customizes weld output characteristics in MIG welding mode

**Fan-On-Demand™** cooling only operates when needed, reducing power consumption and contaminants inside the unit.

**NEW! Trigger hold** allows the operator to release the trigger while making long continuous welds, reducing hand and finger fatigue.

**NEW! Jog and purge** allow operator to jog the wire, or purge gas lines and preset gas pressure at the regulator before welding.



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.



### Miller Electric Mfg. Co.

An Illinois Tool Works Company  
1635 West Spencer Street  
Appleton, WI 54914 USA

### Equipment Sales US and Canada

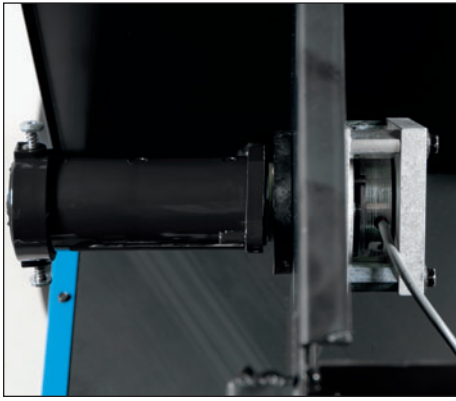
Phone: 866-931-9730  
FAX: 800-637-2315  
International Phone: 920-735-4554  
International FAX: 920-735-4125

### Website

MillerWelds.com



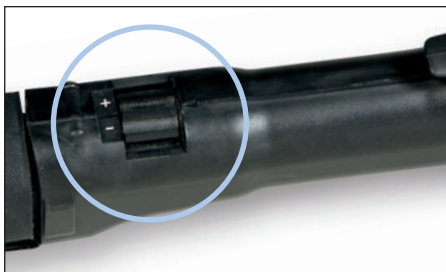
# Miller<sup>®</sup> 350P Aluminum Push-Pull Gun System Additional Features



**Electronic wire spool brake.** Allows wire spool to free spool while welding which provides optimum wire feed delivery. When the gun trigger is released the brake engages, stopping the wire spool from overspooling.

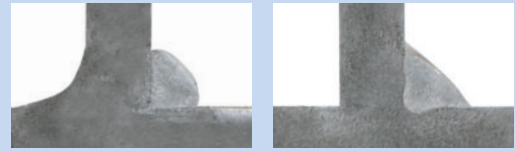


**Gun bushing.** Improved gun connection uses a bushing that captures the power end of gun to ensure correct alignment to drive rolls and provides exceptional ruggedness and durability.



**Synergic "one-knob" control.** Set the wire feed speed control on the gun and the system handles the rest, greatly simplifying set-up and reducing training time. No need to travel back to the power source to change multiple parameters.

## Weld Cross Section



Hot Start Off

Hot Start On

Begin and end welds with ease and confidence. **Hot Start™** eliminates incomplete fusion at the beginning of a weld, a common issue with aluminum welding. **Crater** gradually decreases weld current at the end of a weld to eliminate crater defects. Adjustable pre- and post-flow rates ensure that the puddle always has adequate gas coverage.



SharpArc 0

SharpArc 50

**SharpArc™** controls the arc in Pulsed MIG mode and gives control over the arc cone shape, puddle fluidity, and bead profile. If a gas is used other than Ar 100% (Argon), SharpArc™ can be adjusted to help customize your arc to the gas being used.

## Specifications (Subject to change without notice.)

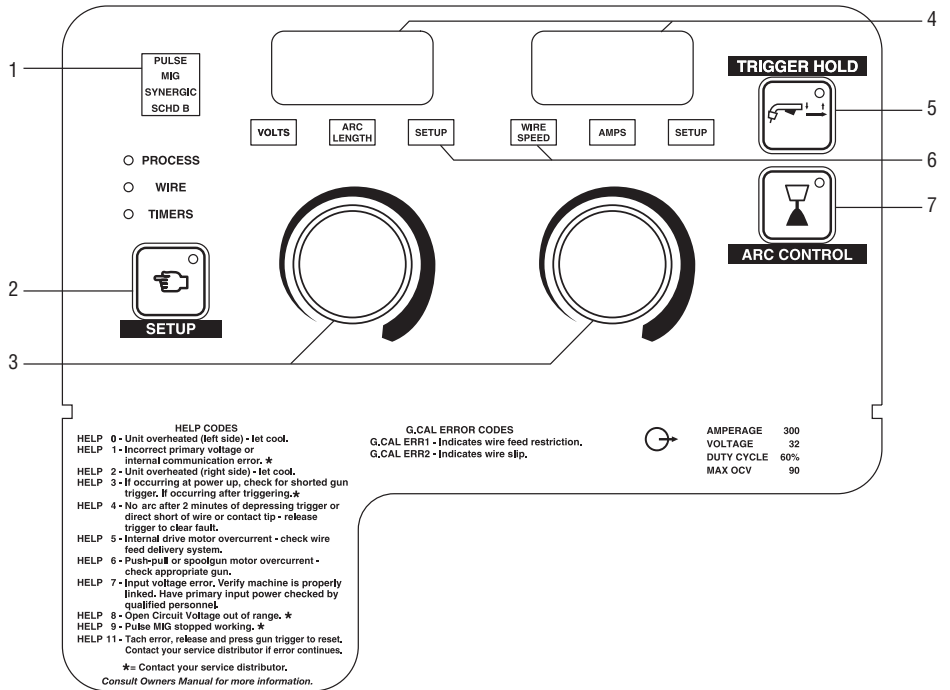


Rated Output	Amperage Range	Amps Input at Rated Output, 60 Hz					Wire Type and Diameter	Wire Feed Speed	Dimensions	Net Weight
		200 V	230 V	460 V	KVA	KW				
<b>Three-phase</b> 300 A at 32 V 60% Duty Cycle	25–400 A	34	30	15	11.6	11.5	<b>Aluminum</b> .035-, .040- and .047-in. (0.9, 1.0 and 1.2 mm)	<b>Push-Pull Gun</b> 50–800 IPM (1.3–20 m/min.)	H: 34 in. (863 mm) W: 19 in. (483 mm) D: 41 in. (1041 mm)	181 lb. (82 kg)
<b>Single-phase</b> 300 A at 32 V 60% Duty Cycle		69	61	30	13.1	11.2				

 Certified by Canadian Standards Association to both the Canadian and U.S. Standards.

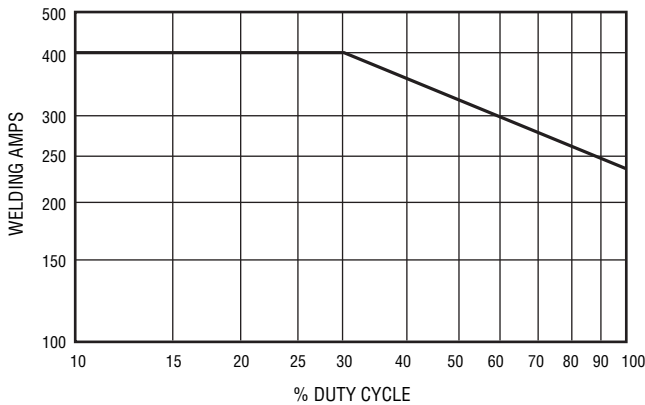
# Control Panel

1. Weld Mode and Schedule Indicator Lights
2. Menu Set-Up Button
3. Adjustment Knobs
4. Displays
5. Trigger Hold Button
6. Weld Function Indicator Lights
7. Arc Control Button

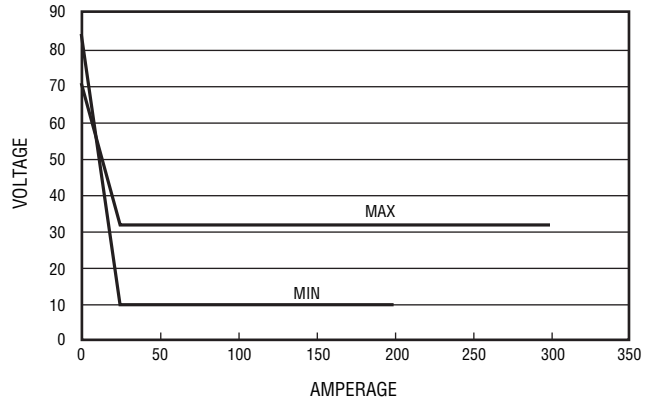


# Performance Data

**DUTY CYCLE CHART**



**VOLT/AMP CURVES**



# Genuine Miller® Accessories

\*Order from Miller Service Parts.

## XR-Aluma-Pro™ Push-Pull Gun

#300 000 15 ft. (4.6 m)

#300 001 25 ft. (7.6 m)

#300 264 35 ft. (10.7 m)

Air-cooled gooseneck-style gun for .030-.047 in. (0.8-1.2 mm) aluminum. Rated at 200 amps at 100% duty cycle.

## XR-Aluma-Pro™ Lite Push-Pull Gun

#300 948 25 ft. (7.6 m)

Air-cooled gooseneck-style gun for .030-.047 in. (0.8-1.2 mm) aluminum. Rated at 175 amps at 60% duty cycle.

## XR™-Pistol Pro Push-Pull Gun

#300 782 15 ft. (4.6 m)

#300 783 25 ft. (7.6 m)

Air-cooled pistol grip gun for .030-.047 in. (0.8-1.2 mm) aluminum. Rated at 200 amps at 100% duty cycle.

## U-Groove Aluminum Drive Rolls for Power Source\*

#194 118 .035 in. (0.9 mm)

#196 301 .040 in. (1.0 mm)

#194 119 .047 in. (1.2 mm)

## Dual Cylinder Rack #195 299

Replaces single cylinder rack.

## Millermatic® Protective Cover #195 142

## Power Cord Plug #213 380\*

For 200 or 230 V, single-phase application. Rated at 250 VAC/50 A NEMA-style 6-50P.



# Ordering Information

Equipment and Options	Stock No.	Description	Qty.	Price
<b>Millermatic® 350P Aluminum</b>	<b>#907 474</b>	200/230/460 V, standard unit (no gun)		
<b>Millermatic® 350P Aluminum Push-Pull Gun Welding System</b>	<b>#951 451</b>	With 15-ft. (4.6 m) XR-Aluma-Pro air-cooled gun		
	<b>#951 452</b>	With 25-ft. (9 m) XR-Aluma-Pro air-cooled gun		
	<b>#951 453</b>	With 25-ft. (9 m) XR-Pistol Pro air-cooled gun		
	<b>#951 454</b>	With 25-ft. (7.6 m) XR-Aluma-Pro Lite air-cooled gun		
<b>Push-Pull Guns</b>				
XR-Aluma-Pro™	<b>#300 000</b>	15-ft. (4.6 m), 200 A gun for .030–.047 in. (0.8–1.2 mm) aluminum		
	<b>#300 001</b>	25-ft. (7.6 m), 200 A gun for .030–.047 in. (0.8–1.2 mm) aluminum		
	<b>#300 264</b>	35-ft. (10.7 m), 200 A gun for .030–.047 in. (0.8–1.2 mm) aluminum		
XR-Aluma-Pro™ Lite	<b>#300 948</b>	25-ft. (7.6 m), 175 A gun for .030–.047 in. (0.8–1.2 mm) aluminum		
XR™-Pistol Pro	<b>#300 782</b>	15-ft. (4.6 m), 200 A gun for .030–.047 in. (0.8–1.2 mm) aluminum		
	<b>#300 783</b>	25-ft. (7.6 m), 200 A gun for .030–.047 in. (0.8–1.2 mm) aluminum		
<b>Accessories</b>				
U-Groove Aluminum Drive Rolls for Power Source	<b>#194 118</b>	.035 in. (0.9 mm). <i>Order from Miller Service Parts</i>		
	<b>#196 301</b>	.040 in. (1.0 mm). <i>Order from Miller Service Parts</i>		
	<b>#194 119</b>	.047 in. (1.2 mm). <i>Order from Miller Service Parts</i>		
Dual Cylinder Rack	<b>#195 299</b>	Field installed, replaces single cylinder rack		
Protective Cover	<b>#195 142</b>			
Power Cord Plug	<b>#213 380</b>	For 200/230 V, single-phase. NEMA-style 6-50P. <i>Order from Miller Service Parts</i>		
Electrode Wire				
Shielding Gas Cylinder				
Helmet/Gloves/Scratch Brush				
<b>Consumables</b>				
		<i>Order from Miller Service Parts</i>		
Contact Tips				
Tapered Contact Tips				
Contact Tip Adapter				
Replacement Liners				
Nozzles				
Tapered Nozzles				
Drive Rolls				

Date:

Total Quoted Price:



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