

# Miller<sup>®</sup> 350P Aluminum

**MIG 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

Aluminum MIG (GMAW)  
Aluminum synergic MIG (GMAW)  
Aluminum synergic pulsed MIG (GMAW-P)

### Rated Output

300 A at 32 VDC, 60% duty cycle,  
1- or 3-phase input power, 60 Hz

**Amperage Range** 25–400 A

### Wire Feed Speed

50–800 ipm (1.3–20 m/min.)  
with push-pull gun

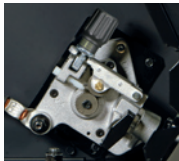
**Net Weight** 181 lb. (82 kg)

### Superior aluminum performance.

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

*Note: Not compatible with standard MIG guns.*

**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 MIG and synergic pulsed MIG** provide communication between power source, feeder and gun. As wire speed increases/decreases, the pulse or MIG parameters also increase/decrease to match the right amount of power needed.

**Trigger schedule select (SCHD)** allows operator to change between two sets of weld parameters by quickly tapping the gun trigger when not welding.

**Trigger hold** allows operator to release the trigger on extended welds, reducing hand and finger fatigue.

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



### Comes complete with:

- 10 ft. (3 m) work cable with clamp
- 10 ft. (3 m) industrial power cord (without plug) for single- or three-phase
- Factory-installed gas solenoid
- Flow gauge regulator and gas hose for argon
- Factory-installed, low-mounted running gear/cylinder rack
- .035 and .047 in. (0.9 and 1.2 mm) U-groove drive rolls for aluminum welding

### Push-pull gun systems include above plus:

- XR air-cooled push-pull gun (see choices on page 4)

### 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 shutoff
- SharpArc<sup>™</sup> controls welding arc cone width in pulsed MIG welding mode
- Inductance control customizes weld output characteristics in MIG welding mode

**Built-in aluminum pulsed MIG programs** for simplicity and improved puddle control. Pulsed welding virtually eliminates burn-through and warping issues on thinner materials.

**Fan-On-Demand<sup>™</sup>** cooling system only operates when needed, reducing noise, energy use and the amount of contaminants pulled through the machine.



Welder is warranted for three years, parts and labor.  
Original main power rectifier parts are warranted for five years.  
Gun warranted for 90 days, parts only.



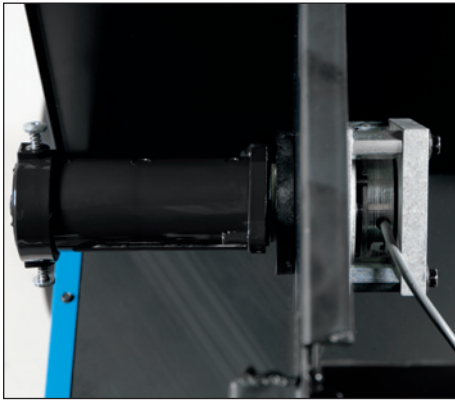
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An ITW Welding Company  
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P.O. Box 1079  
Appleton, WI 54912-1079 USA

**Equipment Sales US and Canada**  
Phone: 866-931-9730  
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**MillerWelds.com**  
f t y i n



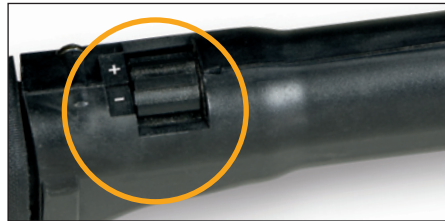
# Miller<sup>®</sup> 350P Aluminum Push-Pull Gun System Additional Features



**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.

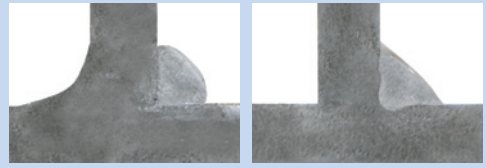


**Gun bushing.** Improved gun connection uses a bushing that captures the power end of gun to ensure correct alignment to drive rolls and provides exceptional ruggedness and durability.



**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.



Hot Start Off

Hot Start On

**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.)

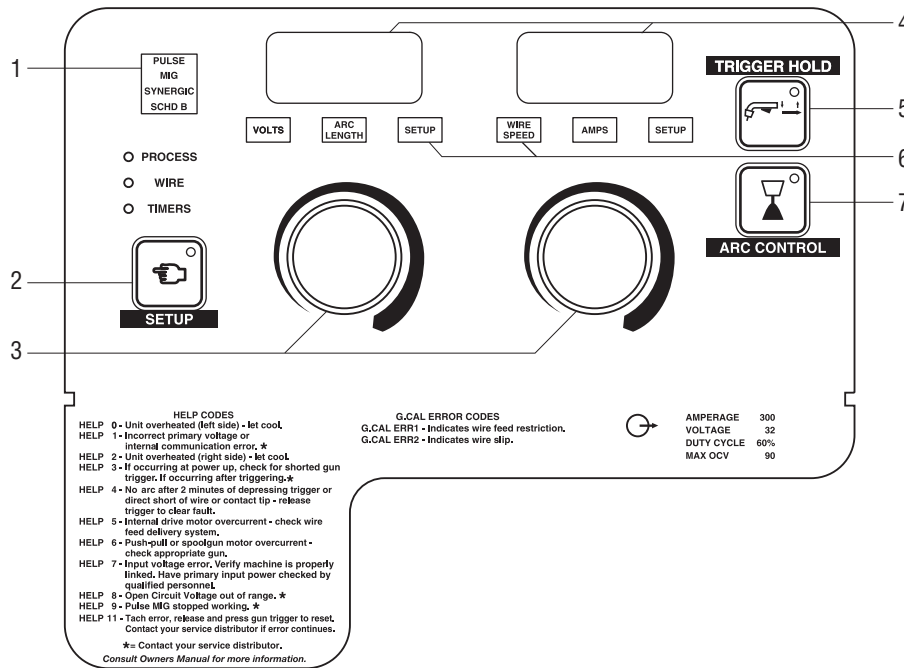


Input Power	Amperage Range	Rated Output	Amps Input at Rated Output, 60 Hz					Wire Feed Speed	Wire Type and Diameter	Dimensions	Net Weight
			200 V	230 V	460 V	KVA	KW				
3-phase	25–400 A	300 A at 32 VDC, 60% duty cycle	34	30	15	11.6	11.5	<b>Push-pull gun</b> 50–800 ipm (1.3–20 m/min.)	<b>Aluminum</b> .035–.047 in. (0.9–1.2 mm)	H: 34 in. (863 mm) W: 19 in. (483 mm) D: 41 in. (1,041 mm)	181 lb. (82 kg)
1-phase			69	61	30	13.1	11.2				

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



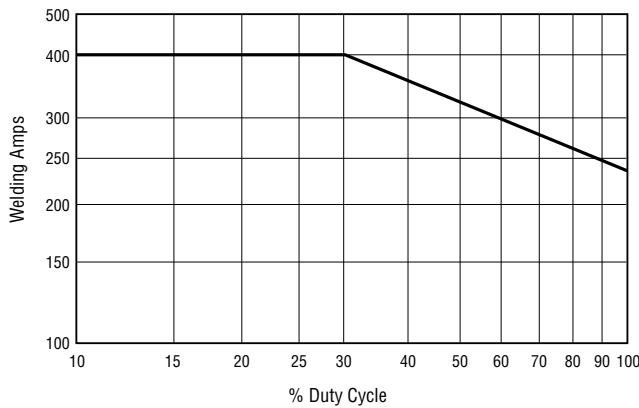
# Control Panel



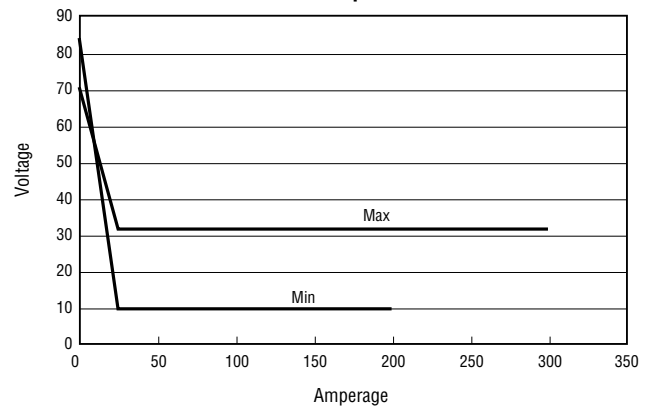
1. Weld Mode and Schedule Indicator Lights
2. Menu Set-Up Button
3. Adjustment Knobs
4. Displays
5. Trigger Hold Button
6. Weld Function Indicator Lights
7. Arc Control Button

# Performance Data

Duty Cycle Chart



Volt/Amp Curve



# Genuine Miller® Accessories

## XR-Aluma-Pro™ Push-Pull Guns

**301568** 15 ft. (4.6 m)

**301569** 25 ft. (7.6 m)

**301570** 35 ft. (10.6 m)

Air-cooled gooseneck-style gun for .030-.047 in. (0.8-1.2 mm) aluminum. Rated at 300 amps at 100 percent duty cycle.

## XR-Aluma-Pro™ Lite Push-Pull Gun

**300948** 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 percent duty cycle.

## XR™-Pistol Pro Push-Pull Guns

**300782** 15 ft. (4.6 m)

**300783** 25 ft. (7.6 m)

Air-cooled gooseneck-style gun for .030-.047 in. (0.8-1.2 mm) aluminum. Rated at 300 amps at 100 percent duty cycle.

## U-Grooved Aluminum Drive Rolls for Millermatic® 350P Aluminum

**268847** .035 in. (0.9 mm)

**268848** .040 in. (1.0 mm)

**268849** .047 in. (1.2 mm)

## Dual Cylinder Rack 195299

Replaces single cylinder rack.



## Protective Cover 195142

Features side pocket.  
 (Not for use with dual cylinder rack.)

## Power Cord Plug 213380

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

# Ordering Information

Power Source and Options	Stock No.	Description	Qty.	Price
<b>Millermatic® 350P Aluminum</b>	<b>907474</b>			
<b>Millermatic® 350P Aluminum Push-Pull Gun Welding System</b>	<b>951868</b>	With 15 ft. (4.6 m) XR-Aluma-Pro air-cooled gun		
	<b>951869</b>	With 25 ft. (9 m) XR-Aluma-Pro air-cooled gun		
	<b>951453</b>	With 25 ft. (9 m) XR-Pistol Pro air-cooled gun		
	<b>951454</b>	With 25 ft. (7.6 m) XR-Aluma-Pro Lite air-cooled gun		
<b>Push-Pull Guns</b>				
XR-Aluma-Pro™ Guns (air-cooled)	<b>301568</b>	15 ft. (4.6 m), 300 A, .030-.047 in. (0.8-1.2 mm) for aluminum wire		
	<b>301569</b>	25 ft. (7.6 m), 300 A, .030-.047 in. (0.8-1.2 mm) for aluminum wire		
	<b>301570</b>	35 ft. (10.6 m), 300 A, .030-.047 in. (0.8-1.2 mm) for aluminum wire		
XR-Aluma-Pro™ Lite Gun (air-cooled)	<b>300948</b>	25 ft. (7.6 m), 175 A, .030-.047 in. (0.8-1.2 mm) for aluminum wire		
XR™-Pistol Pro Guns (air-cooled)	<b>300782</b>	15 ft. (4.6 m), 300 A, .030-.047 in. (0.8-1.2 mm) for aluminum wire		
	<b>300783</b>	25 ft. (7.6 m), 300 A, .030-.047 in. (0.8-1.2 mm) for aluminum wire		
<b>Accessories</b>				
U-Groove Aluminum Drive Rolls for Millermatic 350P Aluminum	<b>268847</b>	.035 in. (0.9 mm)		
	<b>268848</b>	.040 in. (1.0 mm)		
	<b>268849</b>	.047 in. (1.2 mm)		
Dual Cylinder Rack	<b>195299</b>	Field installed, replaces single cylinder rack		
Protective Cover	<b>195142</b>	Features side pocket. Not for use with dual cylinder rack		
Power Cord Plug	<b>213380</b>	For 200/230 V, single-phase. NEMA-style 6-50P		
Electrode Wire				
Shielding Gas Cylinder				
Helmet/Gloves/Scratch Brush				
<b>Consumables</b>				
Contact Tips				
Tapered Contact Tips				
Contact Tip Adapter				
Replacement Liners				
Nozzles				
Tapered Nozzles				
Drive Rolls				

Date:

Total Quoted Price:

Distributed by:

