

Syncrowave® 212

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TIG/Stick/MIG
Welding Power Source



Quick Specs

Light Industrial Applications

Custom Fabrication
Job shops
Welders new to TIG
Motorsports
Maintenance/repair operations
Light manufacturing
Hobbyist

Processes

AC/DC TIG (GTAW)
Pulsed DC TIG (GTAW-P)
DC Stick (SMAW)
MIG (GMAW)*

*With Spoolmate™ 150.

Input Power 120–240 V, 1-phase power, 50/60 Hz

Amperage Range AC/DC TIG: 20–210 A
DC Stick: 30–200 A
MIG: 30–175 A

Rated Output 130 A at 15.2 V, 60% duty cycle

Net Weight 54 lb. (24.5 kg) (air-cooled machine only)

NEW! Auto-Set™ automatically sets your welder to the proper parameters. Simply select the process, material type, material thickness, joint type and tungsten size. Miller recommended machine parameters, gas flow rate, cup size and filler rod diameter will also be provided. You are now ready to TIG weld.

Pro-Set™ (TIG/stick manual modes) eliminates guesswork when setting weld parameters. Simply push the Pro-Set soft key or adjust the parameter until the adjustment indicator line turns green.

AC balance (TIG) control provides adjustable oxide removal which is essential for creating the highest quality aluminum welds.

AC frequency (TIG) controls the width of the arc cone and can improve directional control of the arc.

Pulse (DC TIG). Pulsing can increase puddle agitation, arc stability and travel speeds while reducing heat input and distortion.

DIG (stick) control allows the arc characteristics to be changed for specific applications and electrodes. Lower the DIG setting for smooth running electrodes like E7018 and increase the DIG setting for stiffer, more penetrating electrodes like E6010.



Air-Cooled Ready-to-Weld Package shown (see page 5).

NEW!



Easy-to-understand interface with 4.3-inch LCD display.

- Ensures proper machine setup and parameter selection
- Informative on-screen explanations and dynamic images enhance the parameter selection process

Hot Start™ adaptive control provides positive arc starts without sticking.

Dedicated 4-pin receptacle for Spoolmate™ 150 spool gun.

Multi-language capability (English/Spanish/French).

Dedicated cooler power receptacle provides power for the Coolmate™ 1S.

Cooler-On-Demand™ feature operates the auxiliary cooling system only when needed, reducing noise, energy use, and airborne contaminants pulled through the cooler.

AUTO-LINE™
TECHNOLOGY

Allows for any input voltage hookup (120–240 V) with no manual linking, providing convenience in any job setting. Ideal solution for dirty or unreliable power.

TRUE BLUE®
3YR. WARRANTY

Power source is warranted for three years, parts and labor.



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MillerWelds.com
f X y o i n



Additional Features



Integrated Storage Compartment

- Convenient compartment allows for easy storage of weld cables and power cords in the machine.



EZ-Access™ Consumable Compartment

- Convenient flip-down compartment provides storage for consumables.

Syncrowave® 212 Specifications (Subject to change without notice.)



Input Power	Welding Mode	Welding Amperage Range	Rated Output at 60% Duty Cycle	Amps Input at Rated Load Output	Max. Open-Circuit Voltage	Machine Dimensions	Machine Net Weight			
120 V	DC TIG	20–140 A	110 A at 14.4 V	18.8	46 V	H: 17.5 in. (445 mm) W: 11.25 in. (286 mm) D: 21.5 in. (546 mm)	54 lb. (24.5 kg)			
	AC TIG									
	DC Stick	35–90 A	70 A at 22.8 V	18.8						
	DC MIG	30–100 A	90 A at 18.5 V	19.2						
240 V	DC TIG	20–210 A	130 A at 15.2 V	11.8						
	AC TIG									
	DC Stick	35–160 A	120 A at 24.8 V	16.3						
	DC MIG	30–175 A	130 A at 20.5 V	16						

IP21S rating — This equipment is designed for indoor use. Operating temperature range is 14 to 104°F (-10 to 40°C). Storage temperature range is -22 to 149°F (-30 to 65°C).

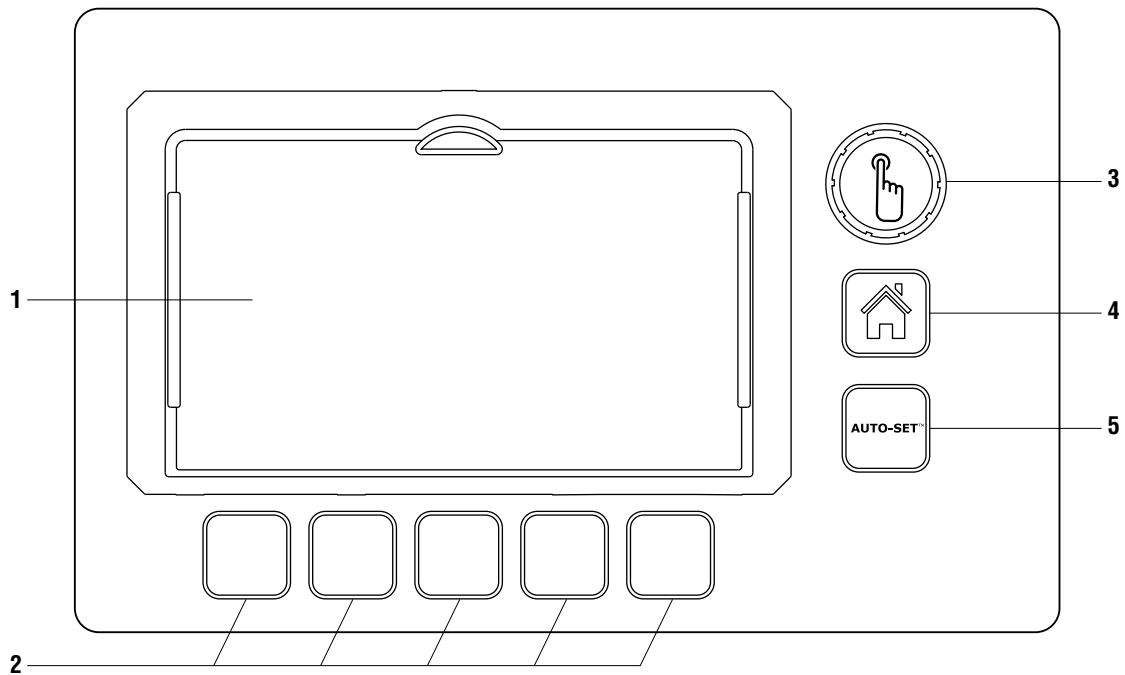


Certified by Canadian Standards Association to both the Canadian and U.S. Standards.

Performance Data

Input Power	AC/DC TIG Duty Cycle	AC/DC TIG Material Thickness Range	DC Stick Duty Cycle	DC Stick Material Thickness Range	MIG Spool Gun Duty Cycle	MIG Spool Gun Material Thickness Range
1-phase	210 A, 20% 130 A, 60% 120 A, 100%	120 V: 20 gauge–1/8 in. 240 V: 20 gauge–1/4 in.	160 A, 20% 120 A, 60% 100 A, 100%	120 V: 16 gauge–3/16 in. 240 V: 16 gauge–3/8 in.	175 A, 20% 130 A, 60% 110 A, 100%	120 V: 1/8 in. 240 V: 1/8–3/8 in.

Control Panel



1. Color LCD Display

- Preview select parameter settings

2. Soft Keys

- Multiple functions depending on which screen is being displayed

3. Control Knob

- Rotate to adjust selected parameter (amperage on home screen) and/or navigate through various menus
- Depress to select and open variable adjustment screens
- Depress to select when in variable adjustment screens

4. Home Button

- Returns user to the home screen

5. Auto-Set™ Button

- Opens the Auto-Set menu where users can select their desired process, application, and material type to output initial weld parameters

Coolmate™ 1S



- Designed for integration with the Syncrowave® 212 (also accepts Multimatic® 220 AC/DC — no cooler power)
- Conveniently located fill spout
- Energy-efficient motor and pump
- 120- or 240-volt input power (includes 120-volt power cord and a jumper cord for use with the Syncrowave 212)

Input Power	Maximum Current Draw	Maximum Cooling Capacity	Rated Cooling Capacity	Tank Capacity	Dimensions	Net Weight
120 V, 1-phase, 50/60 Hz	0.7 A	2,100 W (7,160 Btu/hr.) 0.85 gal./min. (3.2 L/min.)	1,140 W (3,890 Btu/hr.) 0.26 gal./min. (1.0 L/min.)	1.0 gal. (3.8 L)	H: 7.813 in. (198 mm) W: 11.275 in. (289 mm) D: 24 in. (610 mm)	25 lb. (11 kg)
240 V, 1-phase, 50/60 Hz	0.4 A					

Weldcraft™ A-150 (WP-17) TIG Torch



- Flexible braided rubber power cable.
- Diamond Grip™ head design has ergonomic contact points for thumb and fingers. Provides a more comfortable grip and reduces operator fatigue.
- Utilize existing parts. Replacement parts are easy to find. The A-150 Series uses Weldcraft 10N series consumables.

Cooling Method	AC Rating	DC Rating	Consumables	Electrode Range
Air-cooled	115 A, 60% duty cycle	150 A, 60% duty cycle	10N	.020–1/8 in. (0.5–3.2 mm)

Weldcraft™ W-250 (WP-20) TIG Torch



- Flexible braided rubber power cable and hoses.
- Extend torch life and minimize downtime due to overheating with the efficient around-the-head cooling design.
- Comfort and control are increased with the lightweight, compact body design.

Cooling Method	AC Rating	DC Rating	Consumables	Electrode Range
Water-cooled	180 A, 100% duty cycle	250 A, 100% duty cycle	13N	.020–1/8 in. (0.5–3.2 mm)

Syncrowave® 212 Packages

Air-Cooled Ready-to-Weld Package

907911

Includes

- Syncrowave 212
- 12.5-foot (3.8 m) Weldcraft™ A-150 TIG torch with 50 mm flow thru Dinse-style connector (braided)
- 15-foot cable with electrode holder and Dinse-style connector
- 15-foot (4.6 m) work cable with clamp
- Heavy-duty wired foot control with 20-foot cord and 14-pin plug
- Flow gauge regulator for argon/mix (10–50 scfh, barbed bonnet)
- 5-foot (1.5 m) gas hose (single, reinforced pvc, 3/16 in.)
- Weldcraft gas lens accessory kit (air)
- 6.5-foot (2 m) 120-volt power cord and 6.5-foot (2 m) 240-volt power cord
- Material thickness gauge



Air-Cooled Ready-to-Weld Spool Gun Package

951000200

Includes

- Syncrowave 212 Air-Cooled Ready-to-Weld Package (see contents above)
- Spoolmate 150 spool gun
- Spool gun adapter

Not included in package

- Standalone Coolmate™ 1S



Water-Cooled Ready-to-Weld Package

951000201

Includes

- Syncrowave 212
- Coolmate™ 1S
- Coolant (4 one-gallon bottles)
- 12.5-foot (3.8 m) Weldcraft™ W-250 TIG torch with 50 mm flow thru Dinse-style connector (braided)
- 10-foot (3 m) TIG torch cable cover
- 15-foot cable with electrode holder and Dinse-style connector
- 15-foot (4.6 m) work cable with clamp
- Heavy-duty wired foot control with 20-foot cord and 14-pin plug
- Flow gauge regulator for argon/mix (10–50 scfh, barbed bonnet)
- 5-foot (1.5 m) gas hose (single, reinforced pvc, 3/16 in.)
- Weldcraft gas lens accessory kit (water)
- International-style TIG torch adapter (#20, water)
- Gas coupler (5/8"-18 RH)
- 6.5-foot (2 m) 120-volt power cord and 6.5-foot (2 m) 240-volt power cord
- Material thickness gauge





Dual Cylinder Rack Cart 951770

Package consists of both running gear/cylinder rack 301239 and dual cylinder rack conversion kit 301454. Cart features durable construction with rubber rear wheels, convenient front handles, cable holders, plastic consumable box, and dual cylinder rack with tool holder. Holds two cylinders, each gas cylinder should be no greater than 7 inches (178 mm) in diameter or 65 pounds (29.5 kg) in weight.



Coolmate™ 1S 301856

120/240-volt, 1-phase, 50/60 Hz. 1.0-gallon cooler designed to cool torches up to 250 amps. Includes 120-volt power cord and a jumper cord for use with Syncrowave® 212.



Low-Conductivity Coolant 043810

Must be ordered in quantities of four. One-gallon recyclable plastic bottle. Miller coolants contain a base of ethylene glycol and deionized water to protect against freezing to -37 degrees Fahrenheit (-38°C) or boiling to 227 degrees Fahrenheit (108°C). Also contains a compound that resists algae growth.



Performance TIG Gloves

263346 Small

263347 Medium

263348 Large

263349 X-Large

Completely unlined, goat grain leather with triple-padded palm. Sold as six packs (six pairs).



Performance MIG Gloves (Lined)

263332 Medium

263333 Large

263334 X-Large

269618* 2X-Large

Dual-padded and fleece-insulated cow grain palm, goat grain fingers and foam-insulated pig split back.

**Sold as single pair of gloves. All others are sold as six packs (six pairs).*

TIG Torches and Connectors



Weldcraft™ A-125 (WP-9) TIG Torch
WP-9-12-R (12.5 ft.)
WP-9-25-R (25 ft.)
125-amp air-cooled torch. Torch body gas valve models are available.

Note: A-125 (WP-9) torches require 194722 connector.



Weldcraft™ A-150 (WP-17) TIG Torch
WP-17-12 (12.5 ft.)
WP-17-25 (25 ft.)
150-amp air-cooled torch. Torch body gas valve models are available.

Note: A-150 (WP-17) torches require 194722 connector.



Air-Cooled TIG Torch Connector 194722
50 mm Dinse-style gas thru for one-piece air-cooled torch.



TIG Torch Accessory Kit AK-150MFC
Allows Weldcraft™ A-150 torch customization for specific applications. Converts into 28

different torch styles while using the existing cable. Includes collets, collet bodies, nozzles, torch heads, handle and more.



Weldcraft™ W-250 (WP-20) TIG Torch
WP-20-12-R (12.5 ft.)
WP-20-25-R (25 ft.)
250-amp water-cooled torch. Torch body gas valve models are available.

Note: W-250 (WP-20) torches require 195380 connector and B11N17 gas coupler.



Water-Cooled TIG Torch Connector 195380
50 mm Dinse-style flow thru for use with all Weldcraft™ water-cooled torches.

Genuine Miller® Accessories

Spool Gun and Accessories

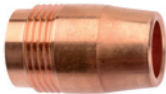


Spoolmate™ 150 Spool Gun 301272
Direct-connect spool gun handles .030–.035 inch (0.8–0.9 mm) 4000/5000 series aluminum and .023–.035 inch (0.6–0.9 mm) steel/stainless steel wires. Rated at 150 amps, 60 percent duty cycle. Includes 20-foot (6.1 m) cable assembly.

Note: Spoolmate 150 requires 301861 adapter.



Contact Tips (5 per package)
199387 For .030-inch (0.8 mm) wire.
199388 For .035-inch (0.9 mm) wire.



Nozzle 050622



Drive Roll (1) 186413
For .030/.035-inch (0.8/0.9 mm) wire.



Push Roll (1) 186414
For .030/.035-inch (0.8/0.9 mm) wire.

Remote Controls and Switches



Wireless Remote Foot Control 301580
For remote current and contactor control. Receiver plugs directly

into the 14-pin receptacle of Miller machine. 90-foot (27.4 m) operating range.



RFCS-14 HD Foot Control 301589
Heavy-duty foot pedal current and contactor control provides increased stability and durability from larger base and heavier cord. Includes 20-foot (6 m) cord with plug.



RCC-14 Remote Contactor and Current Control 151086
East/west rotary-motion fingertip control attaches to TIG torch using two hook-and-loop fasteners. Includes 26.5-foot (8 m) control cord and 14-pin plug.



RCCS-14 Remote Contactor and Current Control 043688
North/south rotary-motion fingertip control attaches to TIG torch using two hook-and-loop fasteners. Includes 26.5-foot (8 m) control cord and 14-pin plug.

Educational Materials

To order, please call Miller Literature at 866-931-9732 or visit MillerWelds.com/resources/tools.

Gas Tungsten Arc Welding (TIG) Publication 250833

Tungsten

Tungsten	Amp Range	2% Ceriated (AC/DC)	2% Lanthanated (AC/DC)
1/16 in. (1.6 mm)	70–150 A	WC116X7	WL2116X7
3/32 in. (2.4 mm)	140–250 A	WC332X7	WL2332X7
1/8 in. (3.2 mm)	225–400 A	WC018X7	WL2018X7
5/32 in. (4.0 mm)	300–500 A	WC532X7	WL2532X7

Ordering Information

Power Source Packages	Stock No.	Description	Qty.	Price
Syncrowave® 212 Air-Cooled Ready-to-Weld Package	907911	See page 5 for contents		
Syncrowave® 212 Air-Cooled Ready-to-Weld Spool Gun Package	951000200	See page 5 for contents		
Syncrowave® 212 Water-Cooled Ready-to-Weld Package	951000201	See page 5 for contents		
Accessories				
Dual Cylinder Rack Cart	951770	Includes running gear/cylinder rack 301239 and dual cylinder rack conversion kit 301454. Must be assembled together		
Coolmate™ 1S	301856	120/240-volt, 1-phase, 50/60 Hz. <i>Requires coolant</i>		
TIG Coolant (must be ordered in quantities of four)	043810	1-gallon plastic bottle. Protects against freezing to -37° Fahrenheit (-38°C) or boiling to 227° Fahrenheit (108°C)		
Replacement Lens Cover	290084	Replaceable lens cover for Syncrowave 212 and Dynasty 210/300		
Flow Gauge Regulator	267834	10–50 scfh		
Welding Gloves		See page 6		
TIG Torches, Kits and Connectors				
Weldcraft™ A-125 (WP-9) TIG Torch	WP-9-12-R WP-9-25-R	12.5 ft. (3.8 m) cable. Requires 194722 connector 25 ft. (7.6 m) cable. Requires 194722 connector		
Weldcraft™ A-150 (WP-17) TIG Torch	WP-17-12 WP-17-25	12.5 ft. (3.8 m) cable. Requires 194722 connector 25 ft. (7.6 m) cable. Requires 194722 connector		
Air-Cooled TIG Torch Connector	194722	50 mm Dinse-style gas thru for one-piece air-cooled torch		
TIG Torch Accessory Kit	AK-150MFC	Converts A-150 torch into 28 different styles. See page 6 for contents		
Weldcraft™ W-250 (WP-20) TIG Torch	WP-20-12-R WP-20-25-R	12.5 ft. (3.8 m) cable. Requires 195380 connector and B11N17 gas coupler 25 ft. (7.6 m) cable. Requires 195380 connector and B11N17 gas coupler		
Water-Cooled TIG Torch Connector	195380	50 mm Dinse-style flow thru for use with all Weldcraft water-cooled torches		
Gas Coupler	B11N17	Required to adapt water-cooled torch to 195380 Dinse-style connector		
Tungsten		See page 7		
Spool Gun and Accessories				
Spoolmate™ 150 Spool Gun	301272	20 ft. (6.1 m) cable (included in Air-Cooled Ready-to-Weld Spool Gun Package)		
Spoolmate Dinse Adapter	301861	Required to adapt Spoolmate to work with a Dinse-style connector		
Consumables and Drive Rolls		See page 7		
Remote Controls and Switches				
Wireless Remote Foot Control	301580	Foot control with wireless 90 ft. (27.4 m) operating range		
RFCS-14 HD	301589	Heavy-duty foot control		
RCC-14	151086	Side-to-side (east/west) fingertip control		
RCCS-14	043688	North/south fingertip control		
Educational Materials				
		See page 7		

Date:

Total Quoted Price:

Distributed by:

