Big 40° Diesel

Diesel Engine-Driven Welder/Generator



Quick Specs

Heavy Industrial Applications

Petro Chemical Piping Structural Steel Work Maintenance and Repair

Processes

CC and CC/CV Models

Stick (SMAW)
TIG (GTAW)
Air Carbon Arc (CAC-A)
(Rated) 5/16 (7.9 mm) Carbons
(Capable) 3/8 (9.5 mm) Carbons
Stud Welding

CC/CV Model Only

MIG (GMAW) Flux Cored (FCAW) AC TIG (Deluxe Model)

Output Range

FPA Tier A

Compliant

CC: DC Stick 55 – 500 A DC/TIG 55 – 500 A CC/CV: DC Stick 40 – 550 A DC/TIG 20 – 350 A AC TIG 15 – 375 A MIG/FCAW 14 – 40 V

Generator Output Rated at 104°F (40°C)

5500 Watts Peak — 4000 Watts Continuous 15,000 Watts 3-Phase / 12,000 Watts 1-Phase (Deluxe Model)

Accu-Rated — Not Inflated Generator Power



The Power of Blue®

AC TIG weld aluminum with deluxe model. The most AC weld output on any engine drive. (High-frequency unit required.)

Silenced. Only 65 dB (90 Lwa) at idle. 73.2 dB at 23 ft (98.7 Lwa) maximum output. Improves work site communications.

Automatic idle saves fuel and prolongs engine life along with reducing the sound level.

Quick and easy maintenance with single-side access to oil level check, oil fill, oil filter, fuel filter and air cleaner.

Enclosed base and case protects ——internal components from corrosive environments and reduces sound levels.

Remote toolless oil drain that allows oil to be drained without getting under the engine and reduces the chance of oil spillage.

Hot Start™ provides positive Stick electrode starts to make it easy to start all types of electrodes, and works great for bead tie-ins.



CC/CV Models: The Vault—ultimate control board reliability. See page 4.



Big 40 CC/CV Deluxe Model shown.



Welder/generator is warranted for 3 years, parts and labor. The CATERPILLAR engine is warranted for 2 years by CATERPILLAR.



engine is designed to operate over 10,000 hours before the first basic overhaul. Backed by worldwide CAT support and service.

Meter maintenance displays

- Fuel gauge
- · Hour meter function
- Oil change interval
- High coolant temperature and low oil pressure shutdowns
- Low fuel shutdown engine shuts down before system runs out of fuel, making restarts easy.

Simplified control panel provides easy set-up with fewer controls—less training is required.

Engine gauges standard on all models indicate engine oil pressure and coolant temperature.

More welding amperage!

400 amps at 100% Duty Cycle 450 amps at 60% Duty Cycle 500 amps at 40% Duty Cycle

Arc-Drive™ makes welding easy. Automatically enhances Stick welding, especially on pipe, by focusing the arc and preventing the electrode from going out.

GFCI receptacle as required on most job sites to protect operators from electrical hazards.

CSA, IEC, and NEMA compliant for welders. Degree of protection provided by enclosure IP23.





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Web Site

www.MillerWelds.com



Big 40° Diesel CC Specifications (Subject to change without notice.)





Welding	Weld Output	Weld Output Rated	Max. Open-	Generator Output Rated	Dimensions**	Net Weight
Mode	Range	at 104°F (40°C)	Circuit Voltage	at 104°F (40°C)		(without fuel)***
CC/DC	55-500 A	400 A at 36 VDC (14.4 kW),* 100% Duty Cycle 450 A at 38 VDC (17.1 kW),* 60% Duty Cycle 500 A at 30 VDC (15 kW), 40% Duty Cycle	95	Peak: 5500 watts Continuous: 4000 watts, 34/17 A, 120/240 VAC, 60 Hz while welding	H: 43 in (1092 mm) W: 28-1/2 in (724 mm) D: 65-1/8 in (1654 mm)	1540 lb (697 kg)

^{*}Meets NEMA and IEC ratings. **Additional 7 in (178 mm) to top of exhaust. ***Additional 190 lb (86 kg) when fuel tank is full.

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

Engine Specifications (Subject to change without notice.)

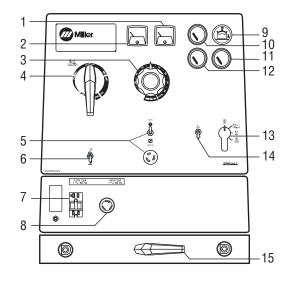
Engine Brand	Features	НР	Туре	Engine Speeds	Fuel Capacity	Oil Capacity	Coolant Capacity	Automatic Engine Shutdown
CATERPILLAR C2.2	EPA Tier 4i compliant, indirect-injected, liquid-cooled engine. Right-side service access with intervals of 500 hours for oil and filters.	32.6	Four-cylinder, industrial, liquid-cooled diesel	Run: 1850 RPM Idle: 1250 RPM	25 gal (95 L)	9 qt (8.5 L)	9 qt (8.5 L)	Low Oil Pressure, High Coolant Temperature, Low Fuel Level

Big 40° Diesel CC Control Panel

Additional Features

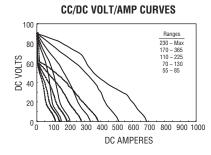
Proven, rugged rheostat control technology that has been in Miller engine drives for over 60 years. Contains no printed control boards.

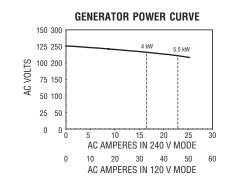
Provisions are provided to plug a RHC3GD34A remote control that will allow precise adjustment of amperage without walking back to the machine.

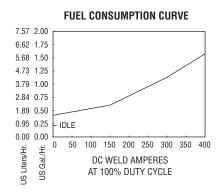


- 1. DC Ammeter*
- 2. DC Voltmeter*
- 3. Amperage Adjust Control
- 4. Amperage Range Switch
- 5. Amperage Adjust Switch and Remote Amperage Adjust Receptacle
- 6. Stick/TIG Selector Switch
- 7. 120 VAC, 20 A GFCI Duplex Receptacle
- 8. 240 VAC, 30 A TwistLock Receptacle (NEMA L6-30)
- 9. Fuel Gauge/Hour Meter/Oil Change Interval/Engine Shutdown Indicator
- 10. Engine Oil Pressure Gauge
- 11. Battery Voltmeter*
- 12. Engine Coolant Temperature Gauge
- 13. Engine Control Switch
- 14. Starting Aid Switch
- 15. Polarity Switch*

Big 40° Diesel CC Performance Data









^{*}Optional on select models.

Big 40° Diesel CC/CV Specifications (Subject to change without notice.)





Welding Mode	Weld Output Range	Weld Output Rated at 104°F (40°C)	Max. Open- Circuit Voltage	Generator Power Output Rated	Dimensions**	Net Weight (without fuel)***
CC/DC	20-550 A	400 A at 36 VDC (14.4 kW),* 100% Duty Cycle	95	Peak: 5000 watts Continuous: 4000 watts, 34/17 A,	H: 43 in (1092 mm)	1545 lb (701 kg)
CV/DC	14-40 V	450 A at 38 VDC (17.1 kW)*, 60% Duty Cycle	56	120/240 VAC, 60 Hz while welding Deluxe Model Additional Power Plant:	W: 28-1/2 in (724 mm)	
		500 A at 34 VDC (17 kw), 40% Duty Cycle		1-phase, 12 kW, 50 A, 120/240 VAC, 60 Hz; or 3-phase, 15 kW, 36 A, 240 VAC, 60 Hz while	D: 65-1/8 in (1654 mm)	
CC/AC (Deluxe	15-375 A	300 A at 32 VAC (9.6 kW), 100% Duty Cycle	65	not welding		
Model)		335 A at 33 V (11.1 kW), 60% Duty Cycle				
		375 A at 35 V (13.1 kW), 40% Duty Cycle				

^{*}Meets NEMA and IEC ratings. **Additional 7 in (178 mm) to top of exhaust. ***Additional 190 lb (86 kg) when fuel tank is full.

Certified by Canadian Standards Association to both the Canadian and U.S. Standards. NEMA EWI (ANSI C87.1) Class (1) output ratings.

Big 40° Diesel CC/CV Control Panel

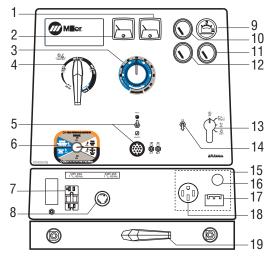
Additional Features

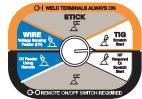
A multi-colored process selector control allows quick and easy process changes without having to use multiple switches.

Heavy-Duty Design — The Vault design provides enhanced arc characteristics that include more dig in the Stick mode with smoother and lower amperage in the TIG mode. Along with the superior welding performance, the **Vault** provides the ultimate reliability in the harshest of environments.

A hermetically-sealed vault protects Miller control boards from dust, moisture, and tough environmental elements. Extreme conditions will not cause the output to change, eliminating the need to periodically turn up the heat.

15,000 watt generator option for stand-by power generation adds 15 kW, three-phase, 240 volt power to CC/CV units. 12 kW, 120/240 volt, single-phase power from a 50 amp receptacle while not welding.

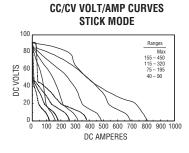


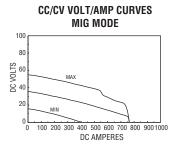


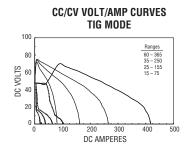
Process/Contactor Selector Switch

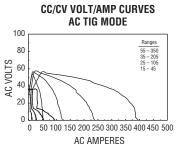
- 1. DC Ammeter*
- 2. DC Voltmeter*
- 3. Amperage/Voltage Adjust Control
- 4. Ampere Range Switch
- 5. Amperage/Voltage Adjust Switch and Remote Amperage/Voltage Adjust Receptacle
- 6. Process/Contactor Selector Switch
- 7. 120 VAC, 20 A GFCI Duplex Receptacle
- 8. 240 VAC, 30 A TwistLock Receptacle (NEMA L6-30)
- 9. Fuel Gauge/Hour Meter/Oil Change Interval/Engine Shutdown Indicator
- 10. Engine Oil Pressure Gauge
- 11. Battery Voltmeter*
- 12. Engine Coolant Temperature Gauge
- **13.** Engine Control Switch
- 14. Starting Aid Switch
- 15. 3-Phase Power Generator Option*
- 16. Strain Relief*
- 17. 50 A, 3-Phase Circuit Breaker
- **18.** 50 A, 120/240 V Receptacle (NEMA 14-50)*
- 19. AC/DC Polarity Switch*

Big 40° Diesel CC/CV Performance Data









^{*}Optional on select models.

Big 40® Diesel CC Options

Weld Ammeter and Voltmeter Kit #195 131 Field

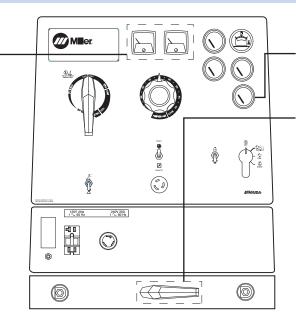
Panel-mounted analog meters monitor welding output.

Installation time: 35 minutes

Cold Weather Starting Aid Kit #195 056 Field

Includes 120 V block heater.

Note: All models come standard with glow plugs.



Battery Voltmeter #195 454 Field

Monitors battery charging circuit.

DC Polarity Reversing Switch Kit #043 942 Field

Changes DC polarity without the use of tools

Installation time: 35 minutes

Big 40® Diesel CC/CV Options

Weld Ammeter and Voltmeter Kit – #195 131 Field

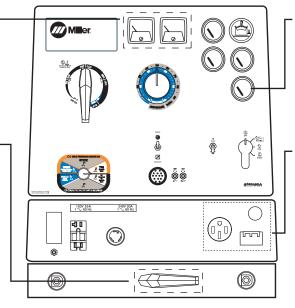
Panel-mounted analog meters monitor welding output. *Deluxe Model comes standard with weld meters*.

Installation time: 35 minutes

AC/DC Polarity Reversing Switch Kit #195 095 Field

Changes DC+/AC/DC- without the use of tools. *Deluxe Model comes standard with AC/DC polarity switch.*

Installation time: 35 minutes



Battery Voltmeter #195 454 Field

Monitors battery charging circuit.

Cold Weather Starting Aid Kit #195 056 Field

Includes 120 V block heater.

Note: All models come standard with glow plugs.

15,000 Watt Generator Plant

12,000 Watts, 1-phase, 120/240 V 15,000 Watts, 3-phase, 240 V The panel is protected by a 50 amp on/off circuit breaker. It includes a 50 A, 1-phase receptacle and strain relief for direct hard-wiring. This power is only available while **NOT** welding. *Comes* standard with Deluxe Model.

Note: Available as factory option. See Ordering Information on back page.

The Vault

Superior Circuit Board Design

Miller's critical circuit boards are engineered to carry *low power* and *low heat* to reduce thermal stress and minimize expansion and contraction. In contrast, our competitor's boards carry *high power* and *high heat*, making them more vulnerable to failure.

"The Vault" Makes Upgrading to Miller CC/CV Units Worry-Free

Concerns with circuit board reliability have resulted in some operators steering clear of CC/CV welder/generators — even though they

offer a superior arc and multiple welding processes. Miller's circuit board reliability isn't a concern since all Big Blue multiprocess industrial engine drives feature the Vault.

Created out of two aluminum halves sealed with silicone, as well as watertight harness connections, the Vault provides a clean circuit board environment, protecting the electronics — and controlling output — in heavy industrial applications. No other competitor protects their electronics with a sealed vault, leaving critical circuit boards exposed to harsh elements that



can disrupt the machine's electronics, and therefore, its operation.



Genuine Miller Accessories (Continued)

Engine Filter Kit #246 985 Field Includes all filters required for proper engine maintenance. Oil filter, primary and secondary fuel filter, and primary air filter.



Spark Arrestor Muffler Kit #195 012 Field Prevents particles

from leaving the muffler that could potentially start a fire. Mandatory when operating on California grasslands, brush, or forest-covered land, and in all National Forests. For other areas, check your state and local laws. Meets US Forest Service standard 5100-1B.



FA-1D Lockable Flame Arrestor Fuel Cap #043 947 Field Fuel cap can be padlocked to prevent vandalism. A built-in flame arrestor prevents flames or sparks from entering the fuel tank.



Vandalism Lockout Kit #195 118 Field

Lockable hinged steel panels cover and protect name plate gauges and ignition switch (padlock included). Also includes engine compartment door lock and key.



Cable Holder #043 946

Saddle-bag-style cable holder. Convenient wrap-around storage of coiled cable for transportation. Stores 100 ft of 2/0 cable on each side.

Note: For best results do not weld when cable is coiled! Canvas cover cannot be used with cable holder.



Protective Cover #194 683 Field

Blue water-resistant canvas cover resists stains and mildew, and protects the finish of your welder.

Note: Protective cover cannot be used with cable holder.

Stick (SMAW) Welding

Weld Leads 2/0 Stick Cable Set, 50 ft (15 m) #173 851

Consists of 50 ft (15 m) 2/0 electrode cable with holder, and 50 ft (15 m) work cable with clamp. 350 A, 100% duty cycle.

2/0 Stick Cable Set, 100/50 ft (30.5/15 m) #043 952

Consists of 100 ft (30.5 m) 2/0 electrode cable with holder, and 50 ft (15 m) work cable with clamp. 300 A, 100% duty cycle.

Plasma Cutting



Spectrum® 375 X-TREME™ #907 339 See Lit. Index No. PC/9.2.

Spectrum® 625 X-TREME™ #907 404 See Lit. Index No. PC/9.6.

Spectrum® 875 #907 390-01-1 See Lit. Index No. PC/9.8.

The Spectrum 375 X-TREME and 625 X-TREME come complete with protective X-CASE™ (not shown).

MIG (GMAW) or Flux Cored (FCAW)



SuitCase® X-TREME™ 8VS Wire Feeder #951 182

SuitCase® X-TREME™ 12VS Wire Feeder #951 184

Lightweight, voltage-sensing wire feeders include secondary contactor, gas valve and drive roll kit. See Lit. Index No. M/6.41.



SuitCase® 8RC Wire Feeder #951 186 SuitCase® 12RC Wire Feeder #951 188

Lightweight and flexible enough to run a variety of wires up to .062 in diameter. Includes remote voltage control and drive roll kit. See Lit. Index No. M/6.5.

MIG (GMAW)/Flux Cored (FCAW) Guns Miller produces a complete line of dependable MIG guns. See Lit. Index Nos. AY/15.0, AY/16.0 and AY/17.0.



Spoolmatic® 30A Spool Gun #130 831

Air-cooled, 200-amp, 1-lb spool gun for

aluminum MIG. See Lit. Index No. M/1.73.

WC-24 Control #137 549 Use with Spoolmatic 30A.

XR[™] Wire Feeders and Guns

Push-pull system designed to handle difficult-to-feed soft alloy wires such as aluminum. See Lit. Index No. M/1.7, M/1.71, and M/1.73.

TIG (GTAW) Welding



Dynasty® 200 SeriesFor premium portable
AC/DC TIG arc quality.
See Lit. Index No.
AD/4.8.



HF-251 Series #042 388 HF-251D-1, 115 VAC **#042 387** HF-251D-2, 230 VAC High-frequency arc starter and stabilizer.

See Accessory Lit. Index No. AY/5.0.



Genuine Miller Accessories (continued)

Remote Controls (CC models only)



RHC-3GD34A Remote Hand Control #041 122 Allows for precise adjustment of amperage. Includes 20 ft (6 m) cord.



RFCS-14 HD Foot Control #194 744 Heavy-duty foot control for current, voltage and contactor control.

Includes 20 ft (6 m) cord and 14-pin plug.



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 fastens to TIG torch using two Velcro® straps. Includes 28 ft (8.5 m) control cord.

Extension Cords for 14-Pin
Remote Controls or 24 VAC Wire Feeders
#242 208 025 25 ft (7.6 m)
#242 208 050 50 ft (15.2 m)
#242 208 080 80 ft (24.4 m)

Remote Controls (CC/CV models)



RHC-14 Hand Control #242 211 020

Miniature hand control for remote current, voltage 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

Fingertip momentary- and maintainedcontact rocker switch for contactor control. Push forward for maintained contact and back for momentary contact. Includes 20 ft (6 m) cord and 14-pin plug.

Trailers and Hitches (For both models.)



4 West Four-Wheel Steerable Off-Road Trailer #042 801

A heavy-duty 2570 lb (1166 kg) capacity trailer designed for use in mines, quarries, and other rough terrain. Has narrow 22 ft (6.7 m) turning radius. Includes 3 in (76 mm) lunette eye, universal hitch and safety chains. *Note: Trailer is shipped unassembled.*



HWY-224 Trailer #043 805 For highway use. OFR-224 Trailer

#043 802 For off-road use.

A 2650 lb (1202 kg) capacity trailer. Welded steel tubing frame, heavy-duty axle with roller bearing hubs and leaf-spring suspension. Includes jack stand, 2 in (50 mm) ball hitch. HWY-224 also includes fenders and lights. Note: Trailer is shipped unassembled.

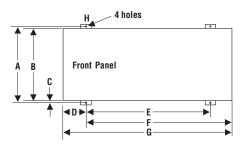
Cable Tree #043 826

Provides an area to conveniently wrap weld cables and extension cords.



Dual Hitch #300 831 2 in (50 mm) ball hitch and 3 in (76 mm) lunette eye in one reversible assembly.

Mounting Specifications



- **A.** 29-13/16 in (757 mm)
- **B.** 27-1/2 in (699 mm)
- **C.** 1 in (25 mm)
- **D.** 9-5/8 in (244 mm)*
- **E.** 46-1/2 in (1181 mm)*
- **F.** 56 in (1422 mm)*
- **G.** 65-1/8 in (1654 mm)
- **H.** 9/16 in (14 mm) dia.

Height: 50 in (1270 mm) (to top of exhaust)

Width: 28-1/2 in (724 mm)

(mounting brackets turned in)

30-3/4 in (781 mm)

(mounting brackets turned out)

Depth: 65-1/8 in (1654 mm)

*With mounting brackets in center position.

Dimensions vary with location of mounting brackets.

Trailer Specifications (Subject to change without notice.)

Model	Gross Axle Weight Rating	Gross Vehicle Weight Rating	Net Payload	Height of Bed	Road Clearance	Track (Center to center of tires)	Standard Tires (Standard rating or P-size rating)	Dimensions	Net Weight
4-West	2000 lb/axle (907 kg/axle)	3000 lb (1361 kg)	2570 lb (1166 kg)	21-1/4 in (540 mm)	8 in (203 mm)	55-1/4 in (1403 mm)	B78-13	Length: 91 in (2311 mm)* Width: 61-1/4 in (1556 mm)	430 lb (195 kg)
HWY-224 0FR-224	3500 lb (1588 kg)	2960 lb (1343 kg)	2650 lb (1202 kg)	18-1/2 in (470 mm)	7-1/2 in (191 mm)	52 in (1321 mm)	B78-13	Length: 105 in (2667 mm) Width: HWY-59-1/2 in (1511 mm)** OFR-58-7/16 in (1484 mm)	320 lb (145 kg)

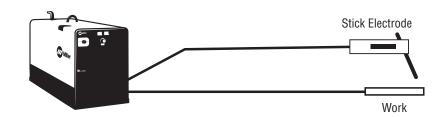
^{*}Does not include tongue. **Width at outside of fenders.



Typical Installations



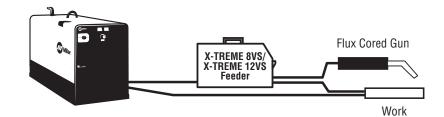
Stick (SMAW) Basic Equipment





Flux-Cored (FCAW) Basic Equipment

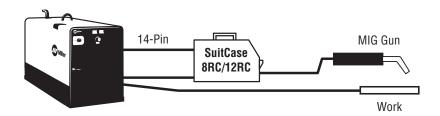
SuitCase® X-TREME™ 8VS #951 182 SuitCase® X-TREME™ 12VS #951 184





MIG (GMAW) Basic Equipment

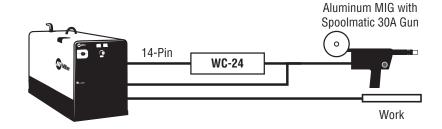
SuitCase® 8RC #951 186 SuitCase® 12RC #951 188





Aluminum MIG (GMAW) Basic Equipment

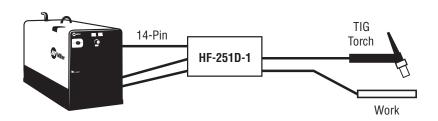
Spoolmatic® 30A #130 831 WC-24 #137 549





TIG (GTAW) Basic Equipment

Dynasty® 200 Series HF-251D-1 #042 388* *TIG power cable adapter required



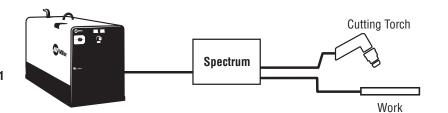


Plasma Basic Equipment

 Spectrum® 375 X-TREME™
 #907 339

 Spectrum® 625 X-TREME™
 #907 404

 Spectrum® 875
 #907 390-01-1





Ordering Information

Power Source and Factory Options	Stock No.	Description	Qty.	Price
Big 40 [®] Diesel CC	#907 171	CSA Model with Engine Gauges and Automatic Idle		
Big 40 [®] Diesel CC/CV	#907 170 #907 170-03-1	CSA Model with Engine Gauges and Automatic Idle CSA Deluxe Model with Engine Gauges, Automatic Idle, Welding Meters, AC/DC Polarity Switch and High kW Option		
Field Accessories				
Weld Ammeter and Voltmeter Kit	#195 131	Standard on Deluxe model		
Battery Voltmeter	#195 454			
Polarity Reversing Switch Kit	#043 942 #195 095	For CC model. DC polarity switch For CC/CV model. AC/DC polarity switch. Standard on Deluxe model		
Cold Weather Starting Aid Kit	#195 056	120 V block heater		
Engine Filter Kit	#246 985	Includes air, oil and fuel filters		
Spark Arrestor Muffler Kit	#195 012	Horizontal externally mounted		
Lockable Fuel Cap Flame Arrestor Kit	#043 947	Padlock not included		
Vandalism Lockout Kit	#195 118	Lockable front control panel and engine compartment		
Cable Holder	#043 946	Saddle-bag-style. Fastens to machine		
Protective Cover	#194 683	For all models. Will not work with cable holder accessory		
Stick Welding Leads		See page 5		
Plasma Cutting				
Spectrum® 375 X-TREME™	#907 339	Includes X-CASE™. See Lit Index No. PC/9.2		
Spectrum® 625 X-TREME™	#907 404	Includes X-CASE™. See Lit Index No. PC/9.6		
Spectrum® 875	#907 390-01-1	See Lit Index No. PC/9.8		
MIG/Flux Cored Accessories				T
SuitCase® X-TREME™ 8VS	#951 182	See Lit Index No. M/6.41		
SuitCase® X-TREME™ 12VS	#951 184	See Lit Index No. M/6.41		
SuitCase® 8RC	#951 186	See Lit Index No. M/6.5		
SuitCase® 12RC	#951 188	See Lit Index No. M/6.5		
MIG (GMAW)/Flux Cored (FCAW) Guns		See Lit Index Nos. AY/15.0, AY/16.0 and AY/17.0		
Spoolmatic® 30A Spool Gun	#130 831	Requires WC-24 Control. See Lit. Index No. M/1.73		
WC-24 Control	#137 549	See Lit. Index No. M/1.5		
XR™ Wire Feeder Control and Guns		See Lit. Index No. M/1.7, M/1.71, and M/1.73		
TIG Accessories				
Dynasty® 200 Series		See Lit Index No. AD/4.8		
High Frequency Arc Starters		See Lit. Index No. AY/5.0		
Remote Controls and Switches		See page 6		
Trailers and Hitches				
4-West Trailer	#042 801	4-wheel steerable implement trailer		1
HWY-224 Trailer	#043 805	Trailer with lights, fenders and 2 in (50 mm) ball hitch		
OFR-224 Trailer	#043 802	Trailer with 2 in (50 mm) ball hitch		
Cable Tree	#043 826	Trailer mounted cable holder for HWY-224 or OFR-224		1
Dual Hitch	#300 831	Combination 2 in (50 mm) ball hitch and 3 in (76 mm) lunette eye in one reversible assembly. For HWY-224 or OFR-224		

Date: Total Quoted Price:



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