

Maxstar® 200 Series

TIG/Stick Welding
Power Source



Quick Specs



Industrial Applications

Precision Fabrication
Petro/Chemical
Aerospace
Food/Beverage Industry
Dairy
Shipboard

Processes

TIG (GTAW)
Pulsed TIG (GTAW-P)
Stick (SMAW)
Air Carbon Arc (CAC-A)
5/32-inch maximum

Input Power 120–480 V, 3- or 1-Phase Power

Amperage Range 1–200 A

Rated Output 200 A at 28 V, 20% Duty Cycle

Net Weight 37 lb. (16.8 kg)



Allows for any input voltage hookup (120–480 V) with no manual linking, providing convenience in any job setting. Ideal solution for dirty or unreliable power.

Fan-On-Demand™ power source cooling system operates only when needed, reducing noise, energy use and the amount of contaminants pulled through the machine.



Maxstar 200 SD

Maxstar 200 DX Complete Package with Wireless Foot Control



DC TIG Features

Exceptionally smooth and precise arc for welding exotic materials.

DC Stick Features

DIG 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.

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

Lift-Arc™ provides DC arc initiation without the use of high frequency.

Blue Lightning™ high-frequency (HF) arc starter for non-contact arc initiation. Provides more consistent arc starts and greater reliability compared to traditional HF arc starters.



Power source is warranted for 3 years, parts and labor.
Coolant system is warranted for 1 year, parts and labor.



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Specifications (Subject to change without notice.)



Welding Mode	Input Power	Welding Amperage Range	Rated Output	Amps Input at Rated Load Output, 50/60 Hz,						Max. Open-Circuit Voltage	Dimensions	Net Weight	
				115 V	230 V	400 V	460 V	KVA	KW				
TIG (GTAW)	3-phase	1-200 A	175 A at 17 V, 60% duty cycle	—	10.5	6.0	5.2	4.2	4.0	80 VDC (9-14 VDC**)	H: 13.5 in. (343 mm) W: 7.5 in. (191 mm) D: 17.5 in. (445 mm)	37 lb. (16.8 kg) with Contractor Kit 69 lb. (31.3 kg)	
	1-phase	1-200 A 1-150 A (120 V)	175 A at 17 V, 60% duty cycle	—	17.4	—	—	4.0	4.0				
			150 A at 16 V, 70% duty cycle	29.7	14.1	—	—	3.4	3.4				
			125 A at 15 V, 100% duty cycle	23.0	—	—	—	2.6	2.6				
Stick (SMAW)	3-phase	1-200 A	150 A at 26 V, 60% duty cycle	—	13.1	7.4	6.4	5.2	5.0	80 VDC (9-14 VDC**)	H: 46.25 in. (1175 mm) W: 23.5 in. (597 mm) D: 22.25 in. (565 mm)	with TIGRunner® 129 lb. (58.5 kg)	
	1-phase	1-200 A	150 A at 26 V, 60% duty cycle	—	21.7	—	—	5.0	5.0				
			1-90 A	125 A at 25 V, 50% duty cycle	34.1	—	—	—	4.0				3.8
				90 A at 24 V, 100% duty cycle	25.0	—	—	—	4.0				3.8

* Indicates idle draw. ** Sense voltage for Stick and Lift-Arc TIG.

Certified by Canadian Standards Association to both the Canadian and U.S. Standards. All CE models conform to the applicable parts of the IEC 60974 series of standards.

Performance Data

DUTY CYCLE

110-120 V INPUT VOLTAGE

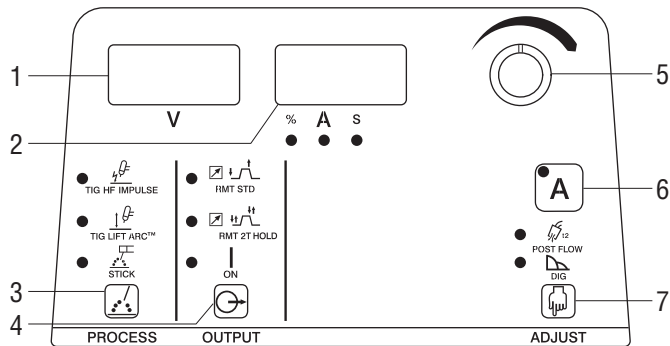
%	TIG	STICK
40%	150 A	125 A
70%	150 A	110 A
100%	125 A	90 A

200-480 V INPUT VOLTAGE

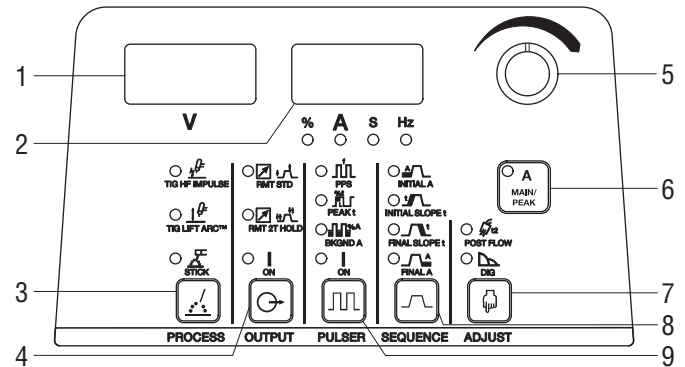
%	TIG	STICK
30%	200 A	200 A
40%	200 A	175 A
60%	175 A	150 A
100%	150 A	125 A

Control Panel

Maxstar 200 SD



Maxstar 200 DX/LX



Control Panel Parameter Values

- 1. Voltmeter Display**
- 2. Ammeter Display**
- 3. Process/
Arc Starting** TIG: HF Impulse, Lift Arc
STICK: Adaptive Hot Start
- 4. Output Control** Standard Remote,
2T Trigger Hold,
Output ON
- 5. Encoder Control**
- 6. Amperage Control**
- 7. Adjust Postflow** 0.0–50 seconds
DIG 0–100%

Advanced Features on the Maxstar LX and DX:

- 8. Sequencer Control**
 - Initial Amps 1–200 A
 - Initial Slope 0.0–25.0 seconds
 - Final Slope 0.0–25.0 seconds
 - Final Amps 1–200 A
- 9. Pulser Control**
 - Pulses per Second 0.1–500 PPS
 - Peak Time 5–95%
 - Background Amps 5–95%

Additional Setup Parameter Values

- Preprogrammed Starts**
 - .020–1/8 in. tungsten
- Programmable Starts**
 - Amperage 5–200 A
 - Time 1–200 milliseconds
 - Ramp Time 0–250 milliseconds
 - Minimum Amperage 1–20 A
- Additional Triggers** 3T, 4T, Mini Logic,
4T Momentary
- Spot/Timer** 0.1–25.0 seconds
- OCV** Low OCV, Normal OCV
- Stick-Stuck Check** On/Off
- Lockouts** Four levels
- Arc Timer** 0.0–9999 hours
and 0–59 minutes
- Cycle Counter** 0–999,999 cycles

Available in Three Models:

SD— Provides the basic features that are required for most TIG or Stick welding applications.

DX— When the job demands greater control the DX provides pulse on/off, pulse frequency, peak % time, background amperage, initial amperage, initial slope time, final slope time and final amperage control.

LX— Automation made simple. With the **Automation Interface Connector**, the integrator can quickly interface to the output disable, weld start/stop, gas start/stop inputs; valid arc, pulse lock out, and end of weld sequence outputs.

LX Additional Features:

- Initial start time 0.0–25.0 seconds
- Weld cycle time 0.0–999 seconds
- Final current time 0.0–25.0 seconds

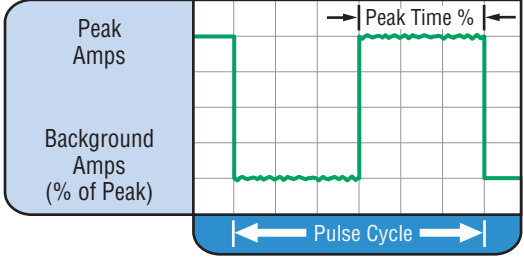
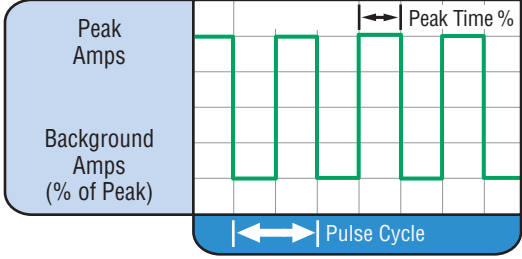
10-Pin Remote Connection Features:

- Weld cycle start/stop
- Gas start/stop
- Final slope output signal
- Pulse output signal
- Valid arc output signal

Pulsed TIG Controls

High-Speed DC Pulsed TIG Controls

- **PPS Pulses per second (Hz):** DC = 0.1 – 500 PPS
- **% ON – % Peak Time:** 5 - 95% (Controls the amount of time during each pulse cycle at the PEAK amperage.)
- **Background Amps:** 5 – 99% (Sets the low-pulse amperage value as a % of the Peak Amps.)

Conventional Pulsed TIG	High-Speed Pulsed TIG
 <p>Typically from 1 to 10 PPS. Provides a heating and cooling effect on the weld puddle and can reduce distortion by lowering the average amperage. This heating and cooling effect also produces a distinct ripple pattern in the weld bead. The relationship between pulse frequency and travel speed determines the distance between the ripples. Slow pulsing can also be coordinated with filler metal addition and can increase overall control of the weld puddle.</p>	 <p>In excess of 40 PPS, Pulsed TIG becomes more audible than visible — causing increased puddle agitation for a better as-welded microstructure. Pulsing the weld current at high speeds — between a high Peak and a low Background amperage — can also constrict and focus the arc. This results in maximum arc stability, increased penetration and increased travel speeds (Common Range: 100 – 500 PPS).</p>

Maxstar® 200 Models/Packages



Maxstar® 200 Power Sources

- Maxstar 200 SD #903 701 (CSA)**
- Maxstar 200 DX #903 701 011 (CSA)**
- Maxstar 200 DX #907 354 (CE)**
- Maxstar 200 LX #903 701 012 (CSA)**

Includes:

- Adjustable shoulder strap
- 8-ft. (2.4 m) power cord (no plug)

- Two 50-mm Dinse-style connectors
- Setup DVD (#251 116)
- One air-cooled TIG torch connector (#195 378). *SD and DX models only*
- One 14-pin and 10-pin receptacle with mating plug. *LX model only*

Note: See page 6 for recommended Contractor Torch Kit.



Fingertip contractor kit shown.

Air-Cooled Contractor Kit Packages

- Maxstar 200 DX with Contractor Kit #951 172 (CSA) w/Foot Control**
- #951 173 (CSA) w/Fingertip Control**

Packages include:

- Maxstar 200 DX (#903 701 011)
- RFCS-14 HD foot control (#194 744) or RCCS-14 fingertip control (#043 688)
- Weldcraft™ A-150 (WP-17) 25-ft. (7.6 m) TIG torch

- 200-amp Stick electrode holder with 15-ft. (4.6 m) #4 cable
- Work clamp with 15-ft. (4.6 m) #4 cable
- Flow gauge regulator with gas hose
- AK2C accessory kit with short back cap, nozzles, collets, collet bodies, and 2% ceriated tungsten electrodes (.040, 1/16, and 3/32 in.)
- One air-cooled TIG torch connector (#195 378)
- Protective carrying case for accessories



Water-Cooled TIGRunner® Package

- Maxstar 200 DX TIGRunner #903 701 022 (CSA)**

Completely assembled.

Package includes:

- Maxstar 200 DX (#903 701 011)
- Coolmate™ 1, 120 VAC (#300 360)
- One gallon of pre-mixed, low-conductivity coolant (#043 810)

- 2-Wheel Trolley Cart (#300 480) with the following features: easy-to-manuever single-cylinder cart with cable and torch holders. Easy to release and remove welder from cart for even more portability. Convenient tray for consumable storage and filler rod holders.

Notes: TIG Torch Connector must be ordered separately. See page 6 for recommended W-250 (WP-20) Torch Kit (#300 185).

The Coolmate 1 requires a separate source for electricity. The Maxstar 200 does not contain auxiliary power.



Maxstar 200 DX Complete Package with Foot Control

Water-Cooled Complete Packages

- Maxstar 200 DX Complete #951 396 (CSA) w/Wireless Foot Control**
- #951 137 (CSA) w/Foot Control**
- #951 138 (CSA) w/Fingertip Control**

Completely assembled.

Package includes:

- Maxstar 200 DX TIGRunner (#903 701 011)
- Coolmate™ 1, 120 VAC (#300 360)
- One gallon of pre-mixed, low-conductivity coolant (#043 810)
- Wireless Remote Foot Control (#300 429) or RFCS-14 HD foot control (#194 744) or RCCS-14 fingertip control (#043 688)

- 2-Wheel Trolley Cart (#300 480) with the following features: easy-to-manuever single-cylinder cart with cable and torch holders. Easy to release and remove welder from cart for even more portability. Convenient tray for consumable storage and filler rod holders.
- W-250 (WP-20) Torch Kit (#300 185). See page 6 for more details.

Note: The Coolmate 1 requires a separate source for electricity. The Maxstar 200 does not contain auxiliary power.

Genuine Miller® Accessories



2-Wheel Trolley Cart #300 480

Easy-to-manuever two-wheel cart features single-cylinder rack, chain for cylinder, straps (quick and easy to detach and carry machine), cable holders, torch holder, storage area, and filler rod storage area. Works with

Dynasty® or Maxstar® 200 and Coolmate™ 1.
Contact your distributor for filler material holders.



Universal Carrying Cart and Cylinder Rack #042 934

Holds power source, and gas cylinder up to 56 inches

(142.2 cm) high measuring 6 to 9 inches (15.2 to 22.8 cm) in diameter.



Coolmate™ 1 #300 360

120 VAC, 60 Hz. One-gallon water cooler designed for 200 A portable welders. Features include fin-and-tube heat exchanger, back-lit power switch, external filter, polyethylene tank and coolant level sight gauge.



Low-Conductivity TIG Coolant #043 810

Sold in multiples of four in one-gallon recyclable plastic bottles. Miller coolant contains a base of ethylene

glycol and deionized water to protect against freezing to -37° Fahrenheit (-38° C) or boiling to 227° Fahrenheit (108° C).



#195 054 kit shown.

Contractor Kits

#195 054 150 A RFCS-14 HD Foot Pedal Kit

#195 055 150 A RCCS-14 Fingertip Kit

All-in-one TIG/Stick welding kit comes with either a RFCS-14 HD foot control or RCCS-14 fingertip control, Weldcraft™ A-150 TIG torch, 200-amp Stick electrode holder with 15-foot (4.6 m) cable, 300-amp work clamp with 15-foot (4.6 m) cable, flow gauge regulator with 12-foot (3.7 m) gas hose, gas hose coupler, AK2C torch accessory kit, TIG torch connector and protective carrying case.



Weldcraft™ A-200 (WP-26) TIG Torch

#WP-26-12-R (12 ft.)

#WP-26-25-R (25 ft.)

Torch body gas valve models are available.

Note: A-200 (WP-26) torch requires #195 379 connector.



Air-Cooled TIG Torch Connectors

#195 379 A-200 (WP-26)

#195 378* All others

50-mm Dinse-style for one-piece air-cooled torch.

*A-80 (WP-24) torches require 24-5 connector.



W-250 (WP-20) Water-Cooled Torch Kit

#300 185

- Weldcraft™ W-250 (WP-20) 25-foot (7.6 m) TIG torch with Dinse-style connector
- Torch cable cover
- Work clamp with 15-foot (4.6 m) 1/0 cable and Dinse-style connector
- Flowmeter regulator
- Gas hose (regulator to machine)
- AK4C torch accessory kit includes nozzles, collets, collet bodies and 2% ceriated tungsten electrodes (1/16, 3/32 and 1/8 inch)



Water-Cooled TIG Torch Connector

#195 377

50-mm Dinse-style with water return line. For use with all Weldcraft™ water-cooled torches.

Remote Controls and Switches



Wireless Remote Foot Control #300 429

For remote current and contactor control. Receiver plugs directly into the 14-pin receptacle of Miller machine. 90-foot (27.4 m) operating range.



Wireless Remote Hand Control #300 430

For remote current and contactor control. Receiver plugs directly into the 14-pin receptacle of Miller machine. 300-foot (91.4 m) operating range.



RCCS-14 Remote Contactor and Current Control #043 688

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



RCC-14 Remote Contactor and Current Control #151 086

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

RFCS-14 HD Foot Control #194 744

Maximum flexibility is accomplished with a reconfigurable cord that can exit the front, back or either side of the pedal. Foot pedal provides remote current and contactor control. Includes 20-foot (6 m) cord and 14-pin plug.

RHC-14 Hand Control #242 211 020

Miniature hand control for remote current and contactor control. Dimensions: 4 x 4 x 3.25 inches (102 x 102 x 83 mm). Includes 20-foot (6 m) cord and 14-pin plug.



RMLS-14 Switch #129 337

Momentary- and maintained-contact rocker switch for contactor control. Push forward for maintained contact and backward for momentary contact. Includes 26.5-foot (8 m) cord and 14-pin plug.



RMS-14 On/Off Control #187 208

Momentary-contact switch for contactor control. Rubber-covered pushbutton dome switch ideal for repetitive on-off applications. Includes 26.5-foot (8 m) cord and 14-pin plug.

Extension Cables for 14-Pin Remote Controls

#242 208 025 25 ft. (7.6 m)

#242 208 050 50 ft. (15.2 m)

#242 208 080 80 ft. (24.4 m)

Genuine Miller® Accessories (Continued)

Educational Materials

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

Gas Tungsten Arc Welding (TIG) Publication
#250 833

Ron Covell TIG Welding Basics DVD
#196 567

Setup DVD #251 116

Video topics include tungsten selection, setup menus, DC pulse, sequencer, balance and frequency settings. (Included with machine.)

TIG Welding Gloves



Classic TIG Welding Gloves

#249 199 Large
#249 200 X-Large
Unlined pigskin leather palm with reinforced palm patch.



Performance TIG Gloves

#263 345 X-Small (Women's)
#263 346 Small (Women's)
#263 347 Medium
#263 348 Large
#263 349 X-Large
Completely unlined, goat grain leather with triple-padded palm.



Performance TIG/Multitask Gloves

#263 352 Small
#263 353 Medium
#263 354 Large
#263 355 X-Large
Goat grain leather with dual-padded palm and wool back.

Tungsten

Tungsten	Amp Range	2% Ceriated (AC/DC)	2% Lanthanated (AC/DC)
.040 in. (1.2 mm)	10–80 A	WC040X7	WL2040X7
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

Multi-Operator Rack



4-Pack Rack (empty) #195 051

Appropriate fuses required.

- Rugged enclosure provides a simple means for protecting and transporting multiple welding power sources for construction, power plant turn-arounds, and shipbuilding applications.
- Light weight and small footprint for easy transportation. Low weight enables the use of elevators to move the rack.
- Top cover protects machines from falling debris.
- Lifting eye simplifies transportation using crane or overhead lifting device.
- Lift truck side and end fork pockets.
- One main disconnect box with fused circuit breaker switches for each machine.
- Common output ground connection (for same polarity use only).



4-Pack Rack Running Gear #195 114

Large 5-inch diameter wheels enable the rack to be moved over grating and driveway gravel.

Power Source	Rack Capacity	Input Power to Rack	Generator kW (Required)	Rack Fuse Size (3 per Power Source Required)*	Dimensions	Net Weight
Maxstar 200	4	230 V at 74 A	20 kW	30 A (#199 795)	H: 50.75 in. (1289 mm) W: 25.5 in. (648 mm) D: 26.5 in. (673 mm)	Rack only 166 lb. (75 kg)
		460 V at 36 A	20 kW	15 A (#220 514)		

*Rack comes with 25 A fuses. Order appropriate fuses for primary voltage.

Ordering Information

Equipment and Options	Stock No.	Description	Qty.	Price
Maxstar® 200 SD	#903 701	Auto-Line™ 120–480 VAC, 50/60 Hz, CSA . 8-ft. power cord		
Maxstar® 200 DX	#903 701 011	Auto-Line™ 120–480 VAC, 50/60 Hz, CSA . 8-ft. power cord		
Maxstar® 200 DX International	#907 354	Auto-Line™ 120–480 VAC, 50/60 Hz, CE . 8-ft. power cord		
Maxstar® 200 LX	#903 701 012	Auto-Line™ 120–480 VAC, 50/60 Hz, CSA . 8-ft. power cord		
Air-Cooled Packages				
Maxstar® 200 DX Contractor Kit w/Foot Control	#951 172	Auto-Line™ 120–480 VAC, 50/60 Hz, CSA . 8-ft. power cord		
Maxstar® 200 DX Contractor Kit w/Fingertip Control	#951 173	Auto-Line™ 120–480 VAC, 50/60 Hz, CSA . 8-ft. power cord		
Water-Cooled Packages				
Maxstar® 200 DX TIGRunner®	#903 701 022	Auto-Line™ 120–480 VAC, 50/60 Hz, CSA . 8-ft. power cord (Torch kit and accessories sold separately)		
Maxstar® 200 DX Complete with Wireless Remote Foot Control	#951 396	Auto-Line™ 120–480 VAC, 50/60 Hz, CSA . 8-ft. power cord		
Maxstar® 200 DX Complete w/Foot Control	#951 137	Auto-Line™ 120–480 VAC, 50/60 Hz, CSA . 8-ft. power cord		
Maxstar® 200 DX Complete w/Fingertip Control	#951 138	Auto-Line™ 120–480 VAC, 50/60 Hz, CSA . 8-ft. power cord		
TIG Torches, Kits and Connectors				
Air-Cooled Contractor Kits	#195 054 #195 055	Foot pedal Fingertip		
Weldcraft™ A-200 (WP-26) TIG Torch	#WP-26-12-R #WP-26-25-R	12-ft. (3.7 m) cable. Requires #195 379 connector 25-ft. (7.6 m) cable. Requires #195 379 connector		
Air-Cooled TIG Torch Connectors	#195 379 #195 378	Connects Weldcraft™ A-200 (WP-26) torch to Dinse-style connector Connects all air-cooled Weldcraft™ torches (except A-200) to Dinse-style connector. A-80 (WP-24) torches require 24-5 connector		
W-250 (WP-20) Torch Kit	#300 185			
Water-Cooled TIG Torch Connector	#195 377	Connects Weldcraft™ water-cooled torches to Dinse-style connector		
Tungsten		See page 7		
Remote Controls				
Wireless Remote Foot Control	#300 429	Foot control with wireless 90-ft. (27.4 m) operating range		
Wireless Remote Hand Control	#300 430	Hand control with wireless 300-ft. (91.4 m) operating range		
RCCS-14	#043 688	North/south fingertip control		
RCC-14	#151 086	East/west fingertip control		
RFCS-14 HD	#194 744	Heavy-duty foot control		
RHC-14	#242 211 020	Hand control		
RMLS-14	#129 337	Momentary/maintained rocker switch		
RMS-14	#187 208	Momentary rubber dome switch		
Extension Cables	#242 208 025 #242 208 050 #242 208 080	25 ft. (7.6 m) 50 ft. (15.2 m) 80 ft. (24.4 m)		
Accessories				
4-Pack Rack (empty)	#195 051	<i>Order power source and fuses separately</i>		
4-Pack Rack Running Gear	#195 114	Four 5-in. diameter wheels and brackets		
Fuses	#199 795 #220 514	230 V, 30 A individual fuse. 12 required for 4-Pack 460 V, 15 A individual fuse. 12 required for 4-Pack		
2-Wheel Trolley Cart	#300 480			
Universal Carrying Cart and Cylinder Rack	#042 934			
Coolmate™ 1	#300 360	120 VAC, 60 Hz. <i>Requires coolant</i>		
TIG Coolant (Must be ordered in quantities of four)	#043 810	1-gallon plastic bottle		
Dinse-Style Connector 50 mm (1 male)	#042 418	Used to connect weld cable to Dinse terminal machine		
Dinse-Style Connector 50 mm (1 male, 1 female)	#042 419	Used to extend weld cables		
Dinse/Tweco® Adapter	#042 465	Male Dinse to female Tweco		
Dinse/Cam-Lok Adapter	#042 466	Male Dinse to female Cam-Lok		
Gas Tungsten Arc Welding (TIG) Publication	#250 833			
Ron Covell TIG Welding Basics DVD	#196 567			
Setup DVD (included with machine)	#251 116			

Date:

Total Quoted Price:

Distributed by:

