# **Dynasty 200 Series**

TIG/Stick Welding Power Source





#### 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 45 lb. (20.5 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**<sup>™</sup> power source cooling system operates only when needed, reducing noise, energy use and the amount of contaminants pulled through the machine.



 $\mbox{Lift-Arc}^{\mbox{\tiny M}}$  provides AC or DC arc initiation without the use of high frequency.

**Blue Lightning**<sup>™</sup> 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.



Miller Electric Mfg. Co. An ITW Company

An TTW Company 1635 West Spencer Street P.O. Box 1079 Appleton, WI 54912-1079 USA

## Equipment Sales US and Canada

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

# **AC TIG Features**

**Balance** control provides adjustable oxide removal which is essential for creating the highest quality aluminum welds. These models provide extended ranges.

**Frequency** controls the width of the arc cone and can improve directional control of the arc.

## **AC Waveforms**

#### \_\_\_\_\_ Advanced squarewave,

fast freezing puddle, deep penetration and fast travel speeds.

Soft squarewave for a soft buttery arc with maximum puddle control and good wetting action.

Sine wave for customers that like a traditional arc. Quiet with good wetting.

Triangular wave reduces the heat input and is good on thin aluminum. Fast travel speeds.

## **DC TIG Features**

**Exceptionally smooth** and precise arc for welding exotic materials.

# **AC/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<sup>™</sup> adaptive control provides positive arc starts without sticking.

**Frequency** control adds additional stability when Stick welding in AC for smoother welds.

MillerWelds.com

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# Specifications (Subject to change without notice.)

Welding Mode	Input Power	Welding Amperage Range	Rated Output	Amps 115 V		Rated I 400 V	.oad Ou 460 V	tput, 50 KVA	)/60 Hz KW	Max. Open- Circuit Voltage	Dimensions	Net Weight			
TIG (GTAW)	3-Phase	AC 5-200 A DC 1-200 A	200 A at 18 V, 20% duty cycle 150 A at 16 V,		13.7 0.16* 9.4	8.7 0.24* 6.0	6.9 0.25* 4.7	5.5 0.06* 3.8	5.2 0.03* 3.6	80 VDC (5-10 VDC**)	H: 13.5 in. (343 mm) W: 7.5 in.	45 lb. (20.5 kg) with			
		AC 5-200 A DC 1-200 A	60% duty cycle150 A at 16 V,60% duty cycle		0.16* 15.8 0.23*	0.24*	0.25* 7.9 0.25*	0.06* 3.6 0.05*	0.03* 3.6 0.02*	-	(191 mm) D: 21.5 in. (546 mm) with TIGRunner® H: 46 25 in	Contractor Kit 77 lb.			
		AC 5-150 A DC 1-150 A	140 A at 15.6 V, 40% duty cycle	31.0 0.42*	_	_	_	3.6 0.05*	3.5 0.03*			TIGRunner®	TIGRunner®	TIGRunner®	
			100 A at 14 V, 100% duty cycle	20.7 0.42*	_	_	_	2.3 0.05*	2.3 0.03*		(1175 mm) W: 23.5 in.	TIGRunner® 137 lb.			
Stick (SMAW)	3-Phase	AC 5-200 A DC 1-200 A	200 A at 28 V, 20% duty cycle		20.8 0.16*	13.0 0.24*	10.2 0.25*	8.1 0.06*	7.8 0.03*	80 VDC (5-10 VDC**)	(597 mm) D: 22.25 in.	(62.1 kg)			
			130 A at 25.2 V, 60% duty cycle	_ _	12.3 0.16*	7.6 0.24*	6.0 0.25*	4.8 0.06*	4.6 0.03*	(565 mm) -	(565 mm)				
	1-Phase	DC 1-200 A 60% dut AC 5-105 A 100 A at	130 A at 25.2 V, 60% duty cycle	—   —	20.0 0.23*		10.0 0.25*	4.7 0.05*	4.7 0.03*						
			100 A at 24 V, 60% duty cycle	31.3 0.42*			_	3.6 0.05*	3.6 0.03*						
			90 A at 23.6 V, 100% duty cycle	27.6 0.42*	_		_	3.2 0.05*	3.2 0.03*						

\* While idling. \*\* Sense voltage for Stick and Lift-Arc<sup>™</sup> TIG. Note: Duty cycle limitations on units with 115 V input power are due to the input power cord supplied with the unit.

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

# **Performance Data**

%	TIG	STICK
30%	150 A	100 A
40%	140 A	100 A
60%	120 A	100 A
100%	100 A	90 A

110-120 V INPUT VOLTAGE

#### DUTY CYCLE

#### 200-480 V INPUT VOLTAGE

CC

3 Phase

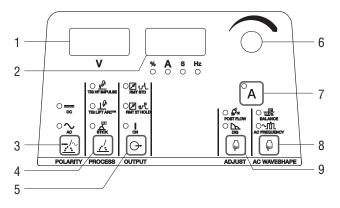
DC

%	TIG	STICK		
20%	200 A	200 A		
30%	180 A	170 A		
40%	166 A	150 A		
60%	150 A	130 A		
100%	120 A	110 A		



# **Control Panel**

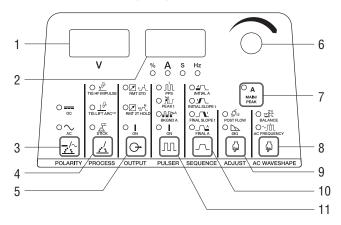
## Dynasty 200 SD



## **Control Panel Parameter Values**

1. Voltmeter Display		٨d	vanced Features or	n the Dynasty DX only:
2. Ammeter Display		10.	Sequencer Contro	I
3. Polarity	AC/DC		Initial Amps	AC: 5–200 A DC: 1–200 A
4. Process/ Arc Starting	TIG: HF Impulse, Lift Arc STICK: Adaptive Hot Start		Initial Slope Final Slope	0.0-25.0 seconds 0.0-25.0 seconds
5. Output Control	Standard Remote, 2T Trigger Hold,		Final Amps	AC: 5–200 A DC: 1–200 A
	Output ON	11.	Pulser Control	
6. Encoder Control			Pulses per Second	
7. Amperage Control			Peak Time	AC: 0.1-500 PPS 5-95%
8. AC Waveshape Balance AC Frequency	30–99% 20–250 Hz		Background Amps	
9. Gas/DIG Preflow	0.0–25.0 seconds			
Postflow	0–50 seconds			
DIG	0-100%			

Dynasty 200 DX



# **Additional Setup Parameter Values Preprogrammed Starts**

#### .020-1/8 in. tungsten **Programmable Starts** Amperage AC: 5-200 A DC: 1-200 A Time 1-200 milliseconds 1-250 milliseconds Ramp Time Minimum Amperage 1-20 A Polarity EP, EN Additional Triggers 3T, 4T, Mini Logic, 4T Momentary Waveshapes Advance Squarewave, Soft Squarewave, Sine Wave, Triangular wave **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

0-999,999 cycles

**Cycle Counter** 

**Miler** 

# **TIG Upgrade Chart**

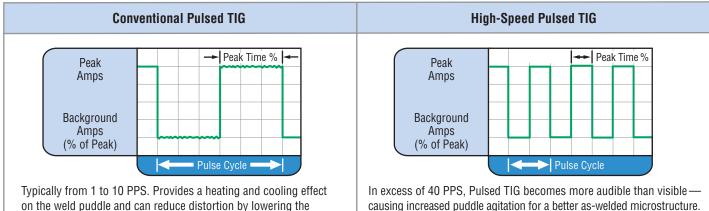
# Which Machine is Right for You?

Why Upgrade?	Syncrowave 210	JPGRAD	DE Dynasty 200	Dynasty 200 Benefits
Maximum Thickness Capacity	1/4-in. Aluminum		1/4-in. Aluminum	Same material thickness capacity.
AC Frequency Control (Aluminum TIG)	Fixed at 100 Hz (Expandable 60–150 Hz)		Variable 20–250 Hz	Higher frequencies provide better arc control and faster travel speeds.
AC Balance Control (Aluminum TIG)	60-80%		30-99%	Extended Balance control provides more versatility on specialty materials.
Pulse Control	Off–50 PPS (Expandable Off–150)		Off-500 PPS	Provides more arc stability.
AC Waveforms (Aluminum TIG)	Soft Squarewave		Advanced Squarewave Soft Squarewave Soft Squarewave Triangular Wave	Advanced Squarewave = Travel faster Soft Squarewave = Maximum puddle control Sine Wave = Traditional characteristics Triangular Wave = Reduced heat input
Portability	133.5 lb. (61 kg)	$\Rightarrow$	45 lb. (20.5 kg)	Easier to move because of size and weight.
Power Flexibility	Auto-Line™ 120−240 V 1-Phase		Auto-Line™ 120-480 V 1-Phase or 3-Phase	Auto-Line™ allows the unit to operate on any voltage. 1- or 3-phase. Even generators!

# **Pulsed TIG Controls**

## **High-Speed Pulsed TIG Controls**

- PPS Pulses per second (Hz): 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.)

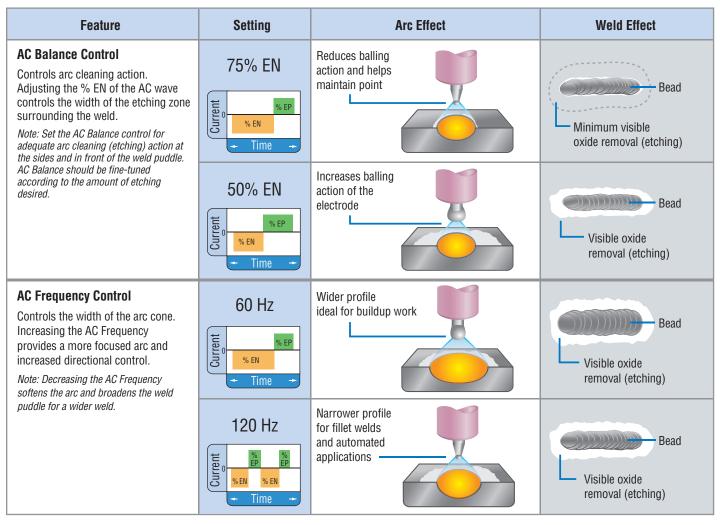


on the weld puddle and can reduce distortion by lowering the average amperage. This heating and cooling effect also produces a distinct ripple pattern in the weld bead. The relationship between pulse frequency and travel speed determines the distance between the ripples. Slow pulsing can also be coordinated with filler metal addition and can increase overall control of the weld puddle.

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).

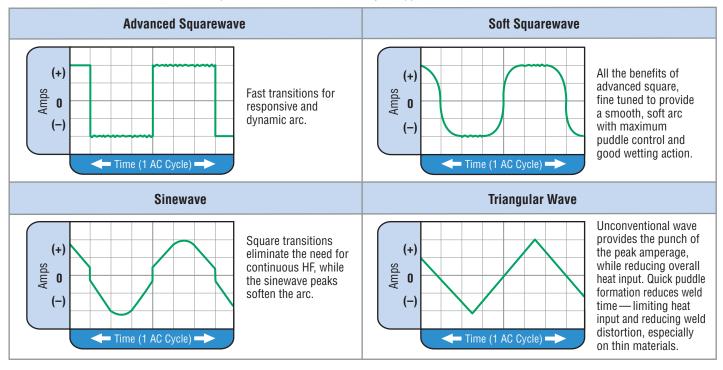


# **AC Waveshape Controls**



## AC Waveform Selection

Select from four different AC waveforms to optimize the arc characteristic for your application. Choose from:





# Dynasty<sup>®</sup> 200 Models/Packages





Fingertip contractor kit shown.





## **Dynasty 200 Power Sources**

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

## **Air-Cooled Contractor Kit Packages**

#### Dynasty 200 DX with Contractor Kit #951 174 (CSA) w/Foot Control #951 175 (CSA) w/Fingertip Control

**FYDT T/D (UDA)** W/FINGeru

- Packages include: Dynasty 200 DX (#903 099 011)
- Bynasty 266 DX (#366 655 611)
  RFCS-14 HD foot control (#194 744) or RCCS-14 fingertip control (#043 688)
- Weldcraft<sup>™</sup> A-150 (WP-17) 25-ft. (7.6 m) TIG torch
- 200-amp Stick electrode holder with 15-ft. (4.6 m) #4 cable

## Water-Cooled TIGRunner® Package

#### Dynasty 200 DX TIGRunner #907 099 021 (CSA)

Completely assembled.

Package includes:

- Dynasty 200 DX (#907 099 011)
- Coolmate<sup>™</sup> 1, 120 VAC (#300 360)
- One gallon of pre-mixed, low-conductivity coolant (#043 810)

- Two 50-mm Dinse-style connectors
- Setup DVD (#251 116)
- One air-cooled TIG torch connector (#195 378)

Note: See page 7 for recommended Contractor Torch Kit.

- 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
- 2-Wheel Trolley Cart (#300 480) with the following features: easy-to-maneuver 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 7 for recommended W-250 (WP-20) Torch Kit (#300 185).

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

# Water-Cooled Complete Packages

#### Dynasty 200 DX Complete

**#951 397 (CSA)** w/Wireless Foot Control **#951 139 (CSA)** w/Foot Control **#951 140 (CSA)** w/Fingertip Control

Completely assembled.

Package includes:

- Dynasty 200 DX (#907 099 011)
- Coolmate<sup>™</sup> 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-maneuver 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 7 for more details.

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



# **Genuine Miller**<sup>®</sup>**Accessories**



#### 2-Wheel Trolley Cart #300 480

Easy-to-maneuver 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<sup>®</sup> or Maxstar<sup>®</sup> 200 and Coolmate<sup>®</sup> 1. Contact your local distributor for filler material holders.



#### 7 Universal Carrying Cart and Cylinder Rack #042 934 Holds power source,

and gas cylinder up to 56 inches (142 cm) high and 6 to 9 inches (15 to 23 cm) in diameter.

## Coolmate<sup>™</sup> 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 coolants 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).



#### **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<sup>™</sup> 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<sup>™</sup> 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.



50-mm Dinse-style for one-piece air-cooled torch. \*A-80 (WP-24) torches require 24-5 connector.



#### W-250 (WP-20) Torch Kit #300 185

- Weldcraft<sup>™</sup> 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<sup>™</sup> water-cooled torches.

## **Remote Controls and Switches**



## Wireless Remote Foot Control #300 429

For remote current and contactor control. Receiver plugs directly in recentrole of Miller machine

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

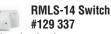
East/west rotary-motion fingertip control attaches to TIG torch using two hook-and-loop fasteners. Includes 26.5-foot (8 m) cord and 14-pin plug.

#### 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:  $4 \times 4 \times 3.25$  inches (102 x 102 x 83 mm). Includes 20-foot (6 m) cord and 14-pin plug.



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)

### **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.)

# 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



# **Ordering Information**

Equipment and Options	Stock No.	Description	Qty.	Price
Dynasty® 200 SD	#907 099	Auto-Line <sup>™</sup> 120-480 VAC, 50/60 Hz, <b>CSA.</b> 8-ft. power cord		
Dynasty® 200 DX	#907 099 011	Auto-Line™ 120-480 VAC, 50/60 Hz, CSA. 8-ft. power cord		
Dynasty® 200 DX International	#907 356	Auto-Line <sup>™</sup> 120-480 VAC, 50/60 Hz, <b>CE.</b> 8-ft. power cord		
Air-Cooled Packages				
Dynasty® 200 DX Contractor Kit w/Foot Control	#951 174	Auto-Line™ 120-480 VAC, 50/60 Hz, <b>CSA.</b> 8-ft. power cord		
Dynasty® 200 DX Contractor Kit w/Fingertip Control	#951 175	Auto-Line™ 120-480 VAC, 50/60 Hz, CSA. 8-ft. power cord		
Water-Cooled Packages				<u> </u>
Dynasty® 200 DX TIGRunner®	#907 099 021	Auto-Line™ 120-480 VAC, 50/60 Hz, <b>CSA.</b> 8-ft. power cord		
		(Torch kit and accessories sold separately)		
Dynasty® 200 DX Complete	#951 397	Auto-Line™ 120-480 VAC, 50/60 Hz, CSA. 8-ft. power cord		
with Wireless Remote Foot Control				
Dynasty® 200 DX Complete w/Foot Control	#951 139	Auto-Line <sup>™</sup> 120-480 VAC, 50/60 Hz, <b>CSA.</b> 8-ft. power cord		
Dynasty® 200 DX Complete w/Fingertip Control	#951 140	Auto-Line <sup>™</sup> 120-480 VAC, 50/60 Hz, <b>CSA.</b> 8-ft. power cord		
TIG Torches, Kits and Connectors				
Air-Cooled Contractor Kits	#195 054	Foot pedal		
	#195 055	Fingertip		
Weldcraft <sup>™</sup> 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	#WP-20-25-K #195 379	Connects Weldcraft <sup>™</sup> A-200 (WP-26) torch to Dinse-style connector		
	#195 378	Connects all air-cooled Weldcraft <sup>™</sup> 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 <sup>™</sup> 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	25 ft. (7.6 m)		
	#242 208 050	50 ft. (15.2 m)		
	#242 208 080	80 ft. (24.4 m)		
Accessories				_
2-Wheel Trolley Cart	#300 480			
Universal Carrying Cart and Cylinder Rack	#042 934	100 VAC CO LLE Dequires seclent		
Coolmate™ 1	#300 360	120 VAC, 60 Hz. <i>Requires coolant</i>		-
TIG Coolant (Must be ordered in quantities of four)	#043 810 #042 418	1-gallon plastic bottle Used to connect weld cable to Dinse terminal machine		
Dinse-Style Connector 50 mm (1 male)		Used to extend weld cables		
Dinse-Style Connector 50 mm (1 male, 1 female)	#042 419 #042 465			
Dinse/Tweco® Adapter	#042 465 #042 466	Male Dinse to female Tweco		
Dinse/Cam-Lok Adapter Gas Tungsten Arc Welding (TIG) Publication	#042 466 #250 833	Male Dinse to female Cam-Lok		
Ron Covell TIG Welding Basics DVD	#250 833 #196 567			
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Date:

Distributed by:



**Total Quoted Price:**