

# Dynasty® 300 Series

TIG/Stick Welding Power Source  

## Quick Specs



### Industrial Applications

Aerospace  
Heavy fabrication  
Precision fabrication  
Aluminum ship repair  
Pipe and tube fabrication  
Anodized aluminum fabrication

### Processes

AC/DC TIG (GTAW)  
Pulsed TIG (GTAW-P)  
Stick (SMAW)  
Air carbon arc (CAC-A)

**Input Power** 208–600 V, 3-phase or 1-phase power

**Amperage Range** 1–300 A (DC)  
2–300 A (AC)

**Rated Output** 250 A at 20 V, 60% duty cycle

**Net Weight** 55 lb. (25 kg)

## Reimagined for Your Pursuit of Perfection.

Experience unflinching precision arc performance paired with a state-of-the-art, user-friendly interface that puts advanced capabilities at your fingertips. Dynasty TIG power sources help minimize error and achieve high-precision welds every time, making the best welders even better.



**Easy-to-understand interface with 4.5-inch LCD display.**

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



**Dynasty 300 Machine only**



**Dynasty 300 Wireless Complete**



## QUIETPULSE™

Activate QuietPulse by selecting sine or triangular waveshape to reduce audible noise.

**Blue Lightning™** provides more consistent high-frequency (HF) arc starts and greater reliability compared to traditional arc starters.

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

## AUTO-LINE™ TECHNOLOGY

Allows for any input voltage hookup (208–600 V) with no manual linking, providing convenience in any job setting. Ideal solution for dirty or unreliable power.

**Program memory** allows easy naming, saving and recalling of favorite weld settings.

- Deliver more productivity by eliminating the need to manually set the parameters
- Deliver consistent quality by welders of all skills

**Pro-Set™** eliminates the guesswork when setting weld parameters.

**Locks and limits.** Provides control of weld parameter ranges minimizing deviation from the welding procedure specification (WPS).

**USB.** Front panel port provides the ability to easily update software, back-up settings and transfer saved weld programs from one unit to the next.

Visit [MillerWelds.com/TIGSoftware](http://MillerWelds.com/TIGSoftware) for the latest software updates and expansions.

**Cooler Power Supply (CPS)** is an integrated 120-volt dedicated-use receptacle for the Coolmate™ 1.3.

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



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



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**MillerWelds.com**







# Weld Process Features

## AC TIG

**Balance** control provides adjustable oxide removal which is essential for creating the highest quality aluminum welds.

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

### AC Waveforms

-  **Advanced square** provides a fast freezing puddle, deep penetration and fast travel speeds.
-  **Soft square** for a soft buttery arc with maximum puddle control and good wetting action.
-  **Sine** for customers that like a traditional arc. Quiet with good wetting.
-  **Triangular** reduces the heat input and is good on thin aluminum. Fast travel speeds.




**Independent amplitude/amperage** control allows EP and EN amperages to be set independently to precisely control heat input to the work and electrode.

## DC TIG

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

**Pulse.** Pulsing can increase puddle agitation, arc stability and travel speeds while reducing heat input and distortion.

### Pulse Waveforms

-  **Square** provides a fast freezing puddle for ultimate arc control.
-  **Sine** produces a reduced audible sound and provides a more fluid puddle that is good for overlaying applications.
-  **Triangular** provides a quick-forming puddle while further reducing heat for thin materials.

**QuietPulse™** Activate QuietPulse by selecting sine or triangular waveshape to reduce audible noise.

## AC/DC Stick

**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.

**AC frequency** control adds stability for smoother welds when AC stick welding.

**Stick-Stuck** detects if the electrode is stuck to the part and turns the welding output off to safely and easily remove the electrode. Menu selectable.

# Specifications (Subject to change without notice.)



Welding Mode	Input Power	Welding Amperage Range	Rated Output at 60% Duty Cycle	Amps Input at Rated Load Output, 50/60 Hz							Max. Open-Circuit Voltage	Dimensions	Net Weight
				208 V	230 V	400 V	460 V	600 V	KVA	KW			
TIG (GTAW)	3-phase	2–300 A (AC) 1–300 A (DC)	250 A at 20 V	19	17	10	8	7	7.5	6.6	60 VDC**	H: 13.88 in. (352 mm) W: 8.5 in. (216 mm) D: 21.88 in. (555 mm)	55 lb. (25 kg)
	1-phase	2–300 A (AC) 1–300 A (DC)	250 A at 20 V	33	30	17	15	11	6.7	6.7			
Stick (SMAW)	3-phase	5–300 A	250 A at 30 V	*	*	14	12	9	9.8	9.1			
	1-phase	5–300 A	200 A at 27.2 V	35	32	*	*	*	9.3	9.2			

\* Refer to owner's manual for complete ratings. \*\* Sense voltage for low OCV stick and Lift-Arc™ TIG.

**IP23 rating** — This equipment is designed for outdoor use. It may be stored, but is not intended to be used outside during precipitation unless sheltered.

Operating temperature range is 14 to 104°F (-10 to 40°C). Storage temperature range is -22 to 149°F (-30 to 65°C). Portions of the preceding text are contained in EN 60974-1: "Welding power sources for arc welding equipment."

 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

Input Power	TIG (GTAW) Duty Cycle	Stick (SMAW) Duty Cycle	AC TIG Material Thickness Range	DC TIG Material Thickness Range	Stick Electrode Maximum Diameter	Carbon Arc Gouging (CAC-A) Maximum	Generator Requirement
380–600 V	300 A, 35% 250 A, 60% 200 A, 100%	300 A, 25% 250 A, 60% 200 A, 100%	0.012–3/8 in. (0.3–9.5 mm)	0.004–3/8 in. (0.1–9.5 mm)	6010: 1/4 in. (6.4 mm) 7018: 7/32 in. (5.6 mm) 7024: 3/16 in. (4.8 mm)	3/16 in. (4.8 mm)	12.5 kW
208–240 V	300 A, 35% 250 A, 60% 200 A, 100%	300 A, 15% 200 A, 60% 150 A, 100%					

## Coolmate™ 1.3 Cooler



- Dynasty® 300 models turn Coolmate 1.3 on and off
- Power indicator light
- Fluid level sight window
- Rustproof polyethylene-molded coolant tank and filler spout
- 1/4 hp motor is thermally protected to guard against overheating
- Efficient fin and tube heat exchanger
- Factory-set pressure relief valve (55 psi) maintains consistent pressure during operation
- Filter and coolant filling spout are conveniently located
- Brass-body, positive displacement rotary vane pump provides consistent coolant flow and pressure rating with long pump-life expectancy

Input Power	Maximum Current Draw	Maximum Cooling Capacity	Rated Cooling Capacity	Tank Capacity	Dimensions	Net Weight
115 V, 50/60 Hz	5.9 A (50 Hz) 4.7 A (60 Hz)	3,400 W (11,600 Btu/hr.) 3.8 qt./min. (3.6 L/min.)	1,330 W (4,540 Btu/hr.) 1.1 qt./min. (1 L/min.)	1.3 gal. (4.9 L)	H: 11.38 in. (289 mm) W: 10.38 in. (264 mm) D: 24.25 in. (616 mm)	46 lb. (21 kg)

## Weldcraft™ W-280 (WP-280) TIG Torch

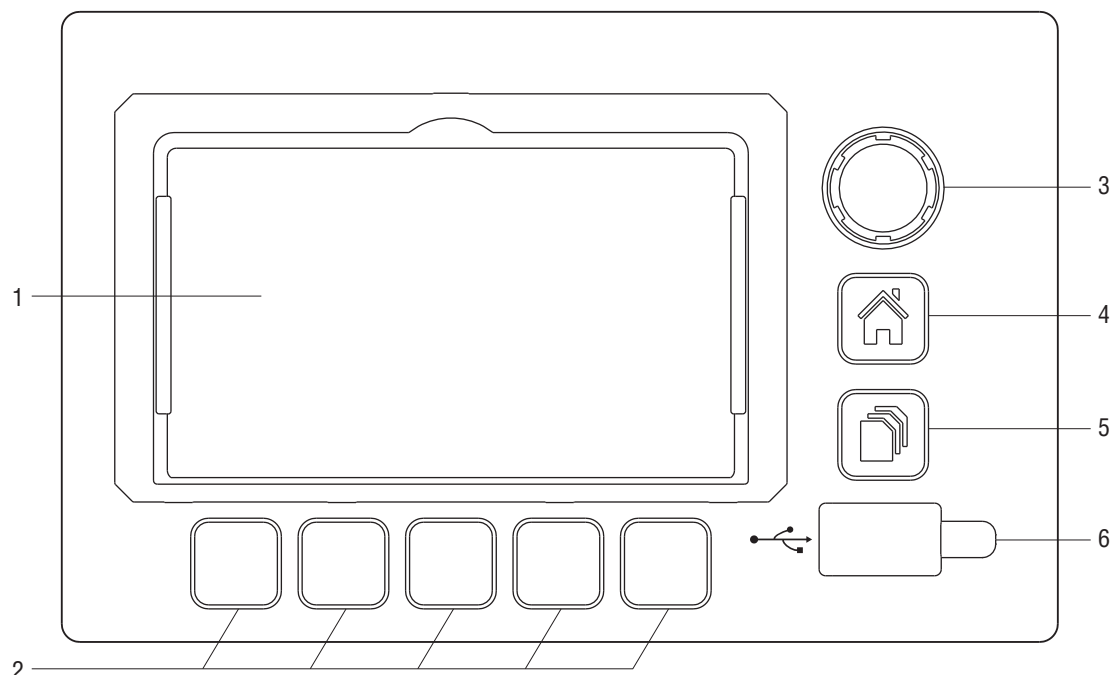


- Two-piece torch head and exclusive Super Cool™ Technology provides additional surface area to increase cooling efficiency and capacity
- Torch body includes an anti-rotation feature and multi-position locking to prevent handle movement during welding and improve operator control
- Secure mechanical fittings and connections minimize leakage

Cooling Method	AC Rating	DC Rating	Consumables	Electrode Range	Cable
Water-cooled	195 A, 100% duty cycle	280 A, 100% duty cycle	13N	.020–1/8 in. (0.5–3.2 mm)	Three-piece

# Dynasty® 300 Control Panel

1. Color LCD Display
2. Soft Keys  
(Multiple functions depending on screen displayed.)
3. Control Knob  
(Adjusts amperage or parameter values depending on mode.)
4. Home Button
5. Program Button
6. USB Port



## Amperage

TIG AC	2–300 A**
TIG DC	1–300 A**
Stick	5–300 A

## Process

AC TIG HF, DC TIG HF,  
AC TIG Lift-Arc™, DC TIG Lift-Arc™,  
AC Stick, DC Stick, Carbon Arc Gouge

## Tungsten (inch)

.020, .040, 1/16, 3/32, 1/8 inch, General  
(.05, 1.0, 1.6, 2.4, 3.2 mm)

## Trigger

Remote Standard: Foot, Finger, Pushbutton  
Sequencer: Pushbutton Hold (2T), 3T 4T, 4TE,  
4TL, 4TM

## Pulse

Pulses per Second*	DC: 0.1–500 pps AC: 0.1–500 pps
Peak Time*	5–95%
Background Amps*	5–95%
DC Pulse Waveshape:	Square, Sine, Triangular

## AC Waveshape

Balance*	Ball: 30–99% EN
Frequency*	20–400 Hz
Waveshape	Advanced Square, Soft Square, Sine, Triangular
Independent	EN Amperage: 2–300 A** EP Amperage: 2–300 A** EN Waveshape: Advanced Square, Soft Square, Sine, Triangular EP Waveshape: Advanced Square, Soft Square, Sine, Triangular
Commutation	Low, High

## Sequencer Control

Initial Amps	AC: 2–300 A** DC: 1–300 A**
Initial Time	0.0–25.0 seconds
Initial Slope	0.0–50.0 seconds
Weld Time	0.0–999 seconds
Final Slope	0.0–50.0 seconds
Final Amps	AC: 2–300 A** DC: 1–300 A**
Final Time	0.0–25.0 seconds

## Preflow

0.0–25.0 seconds

## Postflow

Auto/Off–50 seconds

## DIG\*

Off–100%

## Hot Start™

On, Off

## Stick-Stuck

On, Off

## OCV

Normal, Low

## Programs

1–99 (user defined program names)

## Locks and Limits

Individual Parameters

## Languages

English, Spanish, French, German, Italian,  
Dutch, Swedish, Polish

\*Pro-Set parameter selectable. \*\*Amperage range is tungsten size dependent.

# Dynasty® 300 Models/Packages

## Build an Air-Cooled Package

Select desired stock number for each step.



907818  
Dynasty shown.



301311  
kit shown.

### Step 1 • Select Dynasty

**Dynasty 300** 907818  
**Dynasty 300, CE** 907818003

Dynasty comes with:

- Adjustable shoulder strap and center carry handle
- 8 ft. power cord (no plug)
- Two 50 mm Dinse-style connectors

### Step 2 • Select Contractor Kit

**A-150 TIG Torch and RFCS-14 HD Foot Control** 301309  
**A-150 TIG Torch with RCCS-14 Fingertip Control** 301311  
**A-200 TIG Torch with RFCS-14 HD Foot Control** 301549  
**A-200 TIG Torch with RCCS-14 Fingertip Control** 301550

See page 6 for kit contents.

## Build a Water-Cooled Package

Select desired stock number for each step.



907818002 Dynasty 300  
TIGRunner® shown with  
four bottles of 043810  
Low-Conductivity Coolant.



301580 remote shown.



300990 kit shown.

### Step 1 • Select Dynasty TIGRunner® and Coolant

**Dynasty 300 TIGRunner** 907818002  
**Dynasty 300 TIGRunner, CE** 907818004

**Low-Conductivity Coolant** 043810  
(must be ordered in quantities of four)

Dynasty TIGRunner comes with:

- Adjustable shoulder strap and center carry handle
- 8 ft. power cord (no plug)
- Coolmate™ 1.3 (quick connect model on CE TIGRunner)
- Small Runner™ cart

### Step 2 • Select Remote Control

**Wireless Foot (recommended)** 301580  
**RFCS-14 HD Foot** 301589  
**RCC-14 E/W Fingertip** 151086  
**RCCS-14 N/S Fingertip** 043688  
**RMS-14 Pushbutton** 187208  
**RMLS-14 Momentary/Maintained** 129337  
**RHC-14 Hand** 242211020  
**Wireless Hand** 301582

See page 7 for remote descriptions.

### Step 3 • Select Torch Kit

**W-250 Kit** 300185  
**W-280 Kit** 300990  
(recommended for 300 model)  
**W-375 Kit** 301268

See page 6 for kit contents.

*Note: If ordering torch or torch kit for the CE TIGRunner, the QRW water hose quick connects are required.*

## Water-Cooled Packages

Use a single stock number to order a complete preconfigured system.



### Water-Cooled Complete Package

**Dynasty 300 Complete with Wireless Foot Control** 951937

Water-cooled complete package comes with:

- Dynasty 300 (907818)
- Coolmate™ 1.3
- Coolant (4 one-gallon bottles)
- Small Runner™ cart
- Wireless foot control
- W-280 torch kit (see page 6 for contents)

# Genuine Miller® Accessories



## 2-Wheel Trolley Cart 300971

For Dynasty® 210/300 and Maxstar® 210/280 with or without Coolmate 1.3 cooler. Easy-to-manuever two-wheel cart features single-cylinder rack, cable holders, torch holder, storage area, and filler rod storage area.



## Small Runner™ Cart 301615

For Dynasty® 210/300 and Maxstar® 210/280 with Coolmate 1.3 cooler. Cart features single-cylinder rack, foot pedal holder, two cable/torch holders, and two TIG filler rod holders.



## Coolmate™ 1.3

**301616** CE  
**301617** CE, quick connect  
120 V, 50/60 Hz  
1.3-gallon cooler designed to cool torches up to 280 amps.



## 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.



## Protective Cover 301382

Fits Dynasty® 210/300 and Maxstar® 280.



## Performance TIG Gloves

**263346** Small  
**263347** Medium  
**263348** Large  
**263349** X-Large  
Completely unlined, goat grain leather with triple-padded palm.

## TIG Torches, Kits and Connectors



*Contractor kit 301311 shown.*

### Contractor Kits

**301309** A-150 with RFCS-14 HD  
**301311** A-150 with RCCS-14  
**301549** A-200 with RFCS-14 HD  
**301550** A-200 with RCCS-14  
All-in-one TIG/stick welding kit comes with either a Weldcraft™ A-150 **OR** A-200 TIG torch, RFCS-14 HD foot control **OR** RCCS-14 fingertip control, 200-amp stick electrode holder and 300-amp work clamp with 15-foot (4.6 m) cables, flow gauge regulator with 12-foot (3.7 m) gas hose, gas hose coupler, AK2C torch accessory kit and TIG torch connector.



### Weldcraft™ A-150 (WP-17) TIG Torch

**WP-17-12-R** (12 ft.)  
**WP-17-25-R** (25 ft.)  
150-amp air-cooled torch. Torch body gas valve models are available.

*Note: A-150 (WP-17) torches require 195378 connector.*



### Weldcraft™ A-200 (WP-26) TIG Torch

**WP-26-12-R** (12 ft.)  
**WP-26-25-R** (25 ft.)  
200-amp air-cooled torch. Torch body gas valve models also available.

*Note: A-200 (WP-26) torches require 195379 connector.*



### Weldcraft™ A-250 TIG Torch

**301525025** No valve  
**301526025** With valve  
250-amp air-cooled two-piece torch with 25-foot (7.6 m) cable.

*Note: Two-piece torches require connector:  
042533 Dinse-style  
191981 Tweco-style*



### Air-Cooled TIG Torch Connectors

**195379** A-200 (WP-26)  
**195378\*** All air-cooled torches (except A-200)  
50 mm Dinse-style for one-piece air-cooled torch.

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



*Torch kit 300990 shown.*

### Water-Cooled Torch Kits

**300185** W-250  
**300990** W-280 (recommended)  
**301268** W-375

Kit comes with Weldcraft™ 25-foot (7.6 m) TIG torch with Dinse-style connector, torch cable cover, work clamp with 15-foot (4.6 m) cable, flowmeter regulator with gas hose and AK4GL gas lens torch accessory kit.



### Water-Cooled TIG Torch Connector 195377

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



### Weldcraft™ Gas Hose Quick Connect QRG

Sold individually. Allows for quick connection and removal of torch shielding gas hoses.



### Weldcraft™ Water Hose Quick Connect QRW

Sold individually. Allows for quick connection and removal of torch coolant hoses.

## Genuine Miller® Accessories

### 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) 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) cord and 14-pin plug.



#### RMS-14 On/Off Control 187208

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.



#### RMLS-14 Switch 129337

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.



#### RHC-14 Hand Control 242211020

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.



#### Wireless Remote Hand Control 301582

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

### Educational Materials

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

Equipment and Options	Stock No.	Description	Qty.	Price
<b>Dynasty® 300</b>	<b>907818</b>	Auto-Line™ 208–600 V, 50/60 Hz. 8 ft. power cord		
	<b>907818003</b>	Auto-Line™ 208–600 V, 50/60 Hz, <b>CE</b> . 8 ft. power cord		
<b>Water-Cooled Packages</b>				
<b>Dynasty® 300 TIGRunner®</b>	<b>907818002</b>	Auto-Line™ 208–600 V, 50/60 Hz. 8 ft. power cord (Torch kit, accessories and coolant sold separately)		
	<b>907818004</b>	Auto-Line™ 208–600 V, 50/60 Hz, <b>CE</b> . 8 ft. power cord (Torch kit, accessories and coolant sold separately)		
<b>Dynasty® 300 Complete with Wireless Foot Control</b>	<b>951937</b>	Auto-Line™ 208–600 V, 50/60 Hz. 8 ft. power cord		
<b>Accessories</b>				
2-Wheel Trolley Cart	<b>300971</b>	For Dynasty 210/300 and Maxstar® 210/280 with or without Coolmate 1.3		
Small Runner™ Cart	<b>301615</b>	For Dynasty 210/300 and Maxstar® 210/280 with Coolmate 1.3		
Coolmate™ 1.3	<b>301616</b>	120 V, 50/60 Hz, <b>CE</b> . <i>Requires coolant</i>		
	<b>301617</b>	120 V, 50/60 Hz, <b>CE</b> . Quick connect. <i>Requires coolant</i>		
TIG Coolant (must be ordered in quantities of four)	<b>043810</b>	1-gallon plastic bottle. Protects against freezing to -37° Fahrenheit (-38°C) or boiling to 227° Fahrenheit (108°C)		
Protective Cover	<b>301382</b>	For Dynasty 210/300 and Maxstar 280		
TIG Gloves		See page 6		
<b>TIG Torches, Kits and Connectors</b>				
Air-Cooled Contractor Kits		See page 6		
Weldcraft™ A-150 (WP-17) TIG Torch	<b>WP-17-12-R</b>	12 ft. (3.7 m) cable. Requires <b>195378</b> connector		
	<b>WP-17-25-R</b>	25 ft. (7.6 m) cable. Requires <b>195378</b> connector		
Weldcraft™ A-200 (WP-26) TIG Torch	<b>WP-26-12-R</b>	12 ft. (3.7 m) cable. Requires <b>195379</b> connector		
	<b>WP-26-25-R</b>	25 ft. (7.6 m) cable. Requires <b>195379</b> connector		
Weldcraft™ A-250 TIG Torch	<b>301525025</b>	No valve. 25 ft. (7.6 m) cable		
	<b>301525026</b>	With valve. 25 ft. (7.6 m) cable		
Air-Cooled TIG Torch Connectors	<b>195379</b>	Connects Weldcraft™ A-200 (WP-26) torch to Dinse-style connector		
	<b>195378</b>	Connects all air-cooled Weldcraft™ torches (except A-200) to Dinse-style connector. A-80 (WP-24) torches require <b>24-5</b> connector		
Water-Cooled Torch Kits		See page 6		
Water-Cooled TIG Torch Connector	<b>195377</b>	Connects Weldcraft™ water-cooled torches to Dinse-style connector		
Weldcraft™ Quick Connects (sold individually)	<b>QRG</b>	For gas hoses		
	<b>QRW</b>	For water hoses		
Tungsten		See page 7		
<b>Remote Controls</b>		See page 7		
<b>Educational Materials</b>		See page 7		

Date:

Total Quoted Price:

Distributed by:

