

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 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.



Miller Electric Mfg. LLC
An ITW Welding 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

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

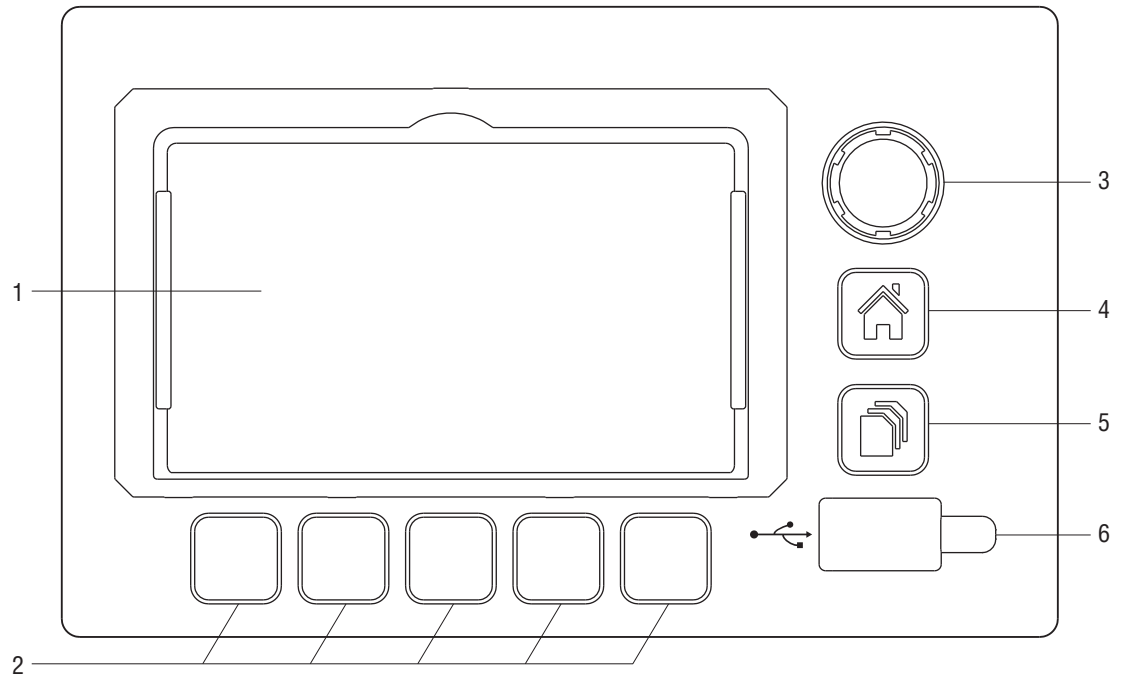


- Two-piece torch head and exclusive Super Cool™ Technology provides additional surface area to increase cooling efficiency and capacity
- Torch body includes an anti-rotation feature and multi-position locking to prevent handle movement during welding and improve operator control
- Secure mechanical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

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

Date:

Total Quoted Price:

Distributed by:

