Dynasty[®] **210 Series**

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TIG/Stick Welding Power Source





Industrial Applications

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

Processes AC/DC TIG (GTAW) Pulsed TIG (GTAW-P) Stick (SMAW)

Input Power 120–480 V, 3-phase or 1-phase power

Amperage Range 1–210 A (DC) 2-210 A (AC)

Rated Output 210 A at 18.4 V, 60% duty cycle

Net Weight 47 lb. (21.3 kg)

Update and expand. Front panel memory card data port provides the ability to easily update software and expand product features. See memory cards on page 7. Visit MillerWelds.com/TIGSoftware for the latest software updates and expansions.

Pro-Set[™] eliminates the quesswork when setting weld parameters. Use Pro-Set when you want the speed, convenience and confidence of preset controls. Simply select the feature and adjust until Pro-Set appears on the display.

Sleep timer conserves electricity. This programmable feature will power down the machine if it sits idle for a specified time.

-AUTO-LINE* TECHNOLOGY

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.

Cooler Power Supply (CPS) is an integrated 120-volt dedicated-use receptacle for the Coolmate[™] 1.3. Available on select models, see page 6.

Cooler-On-Demand[™] feature operates the auxiliary cooling system only when needed, reducing noise, energy use, and airborne contaminants pulled through the cooler. Available on CPS models only.





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.

Meter calibration allows digital meters to be calibrated for certification.

Wind Tunnel Technology™ protects internal electrical components from airborne contaminants, extending the product life.

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



Power source is warrantied 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

AC TIG Features

Balance control provides adjustable oxide removal which is essential for creating the highest quality aluminum welds. DX 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[™] 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	Phase		•	at Rateo 240 V		Output, 480 V			Max. Open- Circuit Voltage	Dimensions	Net Weight
TIG	208-480 V	2-210 A (AC)	210 A at 18.4 V,	3-phase	—	16	14	9	7	6.0	5.8	80 VDC	H: 13.6 in.	47 lb.
(GTAW)		1-210 A (DC)	60% duty cycle	1-phase	—	28	24	14	12	5.8	5.8	(11 VDC*)	(346 mm) W: 8.6 in.	(21.3 kg)
	120 V	2-210 A (AC) 1-210 A (DC)	125 A at 15 V, 60% duty cycle	1-phase	26	—	—	—	—	3.2	3.1		(219 mm) D: 22.5 in.	50 lb. (22.7 kg) with CPS
Stick	208-480 V	5-210 A	160 A at 26.4 V,	3-phase	—	17	15	9	7	6.1	5.8		(569 mm)	WILLI 6P3
(SMAW)			60% duty cycle	1-phase	—	29	25	15	12	6.0	6.0			
	120 V	5–100 A	90 A at 23.6 V, 60% duty cycle	1-phase	28	_	_	_	_	3.3	3.3			

* 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	Generator Requirement
208-480 V	210 A, 60% 175 A, 100%	210 A, 30% 160 A, 60% 125 A, 100%	0.012-1/4 in. (0.3-6.4 mm)	0.002–1/4 in. (0.05–6.4 mm)	6010: 3/16 in. (4.8 mm) 7018: 5/32 in. (4.0 mm) 7024: 5/32 in. (4.0 mm)	9 kW
120 V	150 A, 40% 125 A, 60% 100 A, 100%	100 A, 40% 90 A, 60% 75 A, 100%				

Coolmate[™] 1.3 Cooler



- Dynasty[®] models with CPS 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, 60 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: 11.25 in. (286 mm) W: 10.375 in. (264 mm) D: 24 in. (610 mm)	43 lb. (20 kg)



Weldcraft W-250 (WP-20) TIG Torch



- Efficient around-the-head cooling design extends torch life and minimizes downtime due to overheating
- Lightweight, compact body design for increased comfort and control

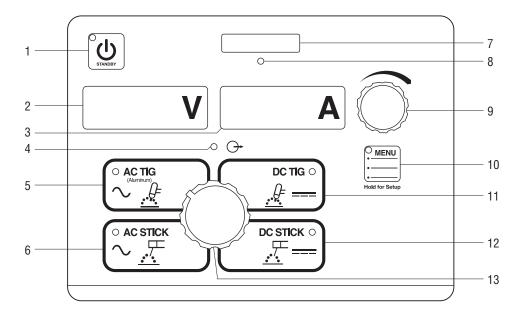
Cooling Method	AC Rating	DC Rating	Consumables	Electrode Range
Water-cooled	180 A, 100% duty cycle	250 A, 100% duty cycle	13N	.020-1/8 in. (0.5-3.2 mm)

TIG Upgrade Chart

Why Upgrade?	Syncrowave [®] 210 UPGRAD	E Dynasty®210 UPGRADE Dynasty®210 DX	Dynasty [®] 210 Benefits
Maximum Thickness Capacity	1/4 in. aluminum	1/4 in. aluminum	Same material thickness capacity.
Pulse Control	Off–50 pps (Expandable Off–150)	Off-250 pps — Off-500 pps	Provides more arc stability.
AC Frequency Control (Aluminum TIG)	Fixed at 100 Hz (Expandable 60–150 Hz)	Variable 70–150 Hz 🔶 Variable 20–400 Hz	Higher frequencies provide better arc control and faster travel speeds.
AC Balance Control (Aluminum TIG)	60-80%	60-80% 50-99%	Extended balance control provides more versatility on specialty materials.
AC Waveforms (Aluminum TIG)	Soft squarewave 📃	Soft squarewave Advanced squarewave Soft squarewave Sine wave 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) 📃	47 lb. (21.3 kg) carry or cart	Reduced size and weight provides improved mobility/portability.
Power Flexibility	Auto-Line™ 120−240 V 1-phase only	Auto-Line™ 120-480 V 3-phase or 1-phase	Auto-Line [™] allows the unit to operate on any voltage. 3-phase or 1-phase. Even generators!



Dynasty® 210 Control Panel



- 1. Standby Switch
- 2. Voltmeter Display
- 3. Ammeter Display
- 4. Output Contactor "On" Indicator
- 5. AC TIG Process Menu Parameters

Amperage	2-210 A**
Balance*	60-80%
Frequency*	70–150 Hz
Postflow	Auto/Off-50 seconds

6. AC Stick Process Menu Parameters Amperage 5–210 A DIG* Off–100%

User Menu (Hold Menu button three seconds.)

AC TIG

- 1. Start = HF/Lift Arc
- 2. Tungsten Size = .020–1/8 in. or .05–3.2 mm 3. Remote Trigger = STD/HOLD/OUTPUT ON

AC Stick

1. Hot Start = ON/OFF 2. Remote Trigger = OUTPUT ON/STD

DC TIG

- 1. Start = Lift Arc/HF
- 2. Tungsten Size = .020-1/8 in. or .05-3.2 mm 3. Remote Trigger = STD/HOLD/OUTPUT ON
- 3. Remote myyer = 31D/HO

DC Stick

- 1. Hot Start = ON/OFF
- 2. Remote Trigger = OUTPUT ON/STD

- 7. Memory Card Port
- 8. Activity Indicator
- 9. Encoder Control
- 10. Menu Button

11. DC TIG Process Menu Parameters

Amperage1-210 A**Pulse*Off-250 ppsPostflowAuto/Off-50 seconds

12. DC Stick Process Menu Parameters

Amperage 5-210 A DIG* Off-100%

13. Process Selector

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

Tech Menu (Hold Menu button five seconds.)

- 1. Arc Time 0.0–9,999 hours 0.0–59 minutes 0–999,999 cycles Resettable
- 2. Error Log = Error event recorder
- 3. Sleep Timer = 1/5/10/15/30/45MIN/1HR
- 4. Stick Stuc = OFF/ON
- 5. OCV = LOW/NORM
- 6. Cooler Power = AUTO/OFF (only on Dynasty models with CPS)
- 7. Machine Reset
- 8. Software Number
- 9. Serial Number



Dynasty® 210 DX Control Panel

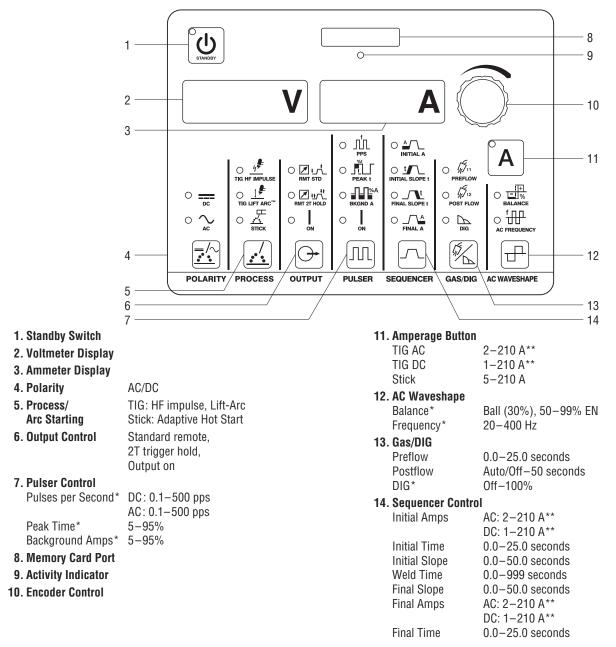
User Menu (Press Gas and Amperage buttons.)

1. Tungsten Size = .020-1/8 in./GEN or .05-3.2 mm

2. Remote Trigger = 2T/3T/4T/4TL/4TE/4Tm

3. Wave Form = SOFT/ADVS/SINE/TRI

4. Stick Hot Start = ON/OFF



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

Tech Menu (Hold Gas and Amperage buttons three seconds.)

- 1. Arc Time 0.0–9,999 hours 0.0–59 minutes 0–999,999 cycles
 - Resettable
- 2. Error Log = Error event recorder 3. Sleep Timer = 1/5/10/15/30/45MIN/1HR
- 4. Stick Stuc = OFF/ON
- 5. OCV = LOW/NORM
- 6. Weld Timers = OFF/ON
- 7. Cooler Power = AUTO/ON/OFF (only on models with CPS)
- 8. Locks = OFF/1-4
- 9. External Pulse Control = OFF/ON
- 10. Machine Reset
- 11. Software Number
- 12. Serial Number
- Miller.

Dynasty[®] 210 Models/Packages

Build an Air-Cooled Package

Select desired stock number for each step.





	Step 1 • Selec	t Dynasty	Step 2 • Select Contractor I	Kit
Dynasty 210 Dynasty 210 (CPS) Dynasty 210 DX Dynasty 210 DX (CPS)	907685 907685002 907686 907686002	Note: For models without the Cooler Power Supply (CPS), the Coolmate 1.3 must be powered through an external 120-volt facility power.	A-150 TIG Torch and RFCS-14 HD Foot Control A-150 TIG Torch with RCCS-14 Fingertip Control A-200 TIG Torch with RFCS-14 HD Foot Control A-200 TIG Torch with RCCS-14 Fingertip Control	301309 301311 301549 301550
Dynasty comes with adjus quick-reference guide and		ap, 8 ft. power cord (no plug), e-style connectors.	See page 7 for kit contents.	





301580 remote shown.

300185 kit shown.

951666

951879

951668

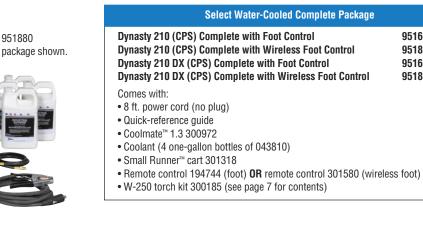
951880

Step 1 \bullet Select Dynasty TIGRunner $^{\mbox{\tiny B}}$ and Coolant	Step 2 • Select Remote Control	Step 3 • Select Torch Kit
Dynasty 210 (CPS) TIGRunner 907685001 Dynasty 210 DX (CPS) TIGRunner 907686001 & Low-Conductivity Coolant 043810 (Must be ordered in quantities of four.)	Wireless Foot (recommended)3018RFCS-14 HD Foot1947RCC-14 E/W Fingertip1510RCCS-14 N/S Fingertip0430RMS-14 Pushbutton1877RMLS-14 Momentary/Maintained1293RHC-14 Hand2422Wireless Hand3018	744 (recommended for 210 model) 086 W-280 Kit 300990 688 208 3337 211020
Dynasty TIGRunner comes with 8 ft. power cord (no plug), quick-reference guide, Coolmate™ 1.3 and Small Runner™ cart.	See page 7 for remote descriptions.	See page 7 for kit contents.

💋 Miller.

Preconfigured Water-Cooled **Packages**

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



Genuine Miller® Accessories

Protective Cover 301382

Fits Dynasty 210/280 and Maxstar 280.



2-Wheel Trolley Cart 300971 Easy-to-maneuver two-wheel cart features single-cylinder rack, chain for cylinder, cable holders, torch holder, storage area, and filler rod storage area. Works with Dynasty®/Maxstar® 210 and 280 with Coolmate 1.3

cooler. Straps also included for mounting Dynasty/Maxstar 200 with Coolmate 1 cooler.



Small Runner[™] Cart 301318

Designed for Dynasty/Maxstar 210 and 280 with or without 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 300972 120 V 1.3-gallon cooler designed to

cool torches up to 280 amps.

Low-Conductivity Coolant 043810

Sold in cases of four one-gallon recyclable plastic bottles. 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.



Performance TIG Gloves

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

Memory Cards

Memory Card Expansion

301151 14-Pin Automation Expansion Provides the ability to access common automation functions through the 14-pin connection.

301152 14-Pin Modbus® Expansion Provides the ability to access basic and advanced functions through the 14-pin connection.

301235 Independent AC Expansion Allows EP and EN amperages and waveforms to be set independently to precisely control heat input to the work and electrode.

Memory Card (Blank) 301080

A blank, commercially available memory card used for transferring software updates and expandable features from your computer to the machine.

TIG Torches, Kits and Connectors

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.

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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.

Air-Cooled TIG Torch Connectors

195378* All air-cooled torches (except A-200) 195379 A-200 (WP-26)

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

Water-Cooled Torch Kits 300185 W-250 (recommended) 300990 W-280

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.

> Weldcraft[™] W-225 Modular (WP-225) **TIG Torch** WP-225-12-R (12 ft.) WP-225-25-R (25 ft.)

225-amp water-cooled torch. Includes 1726 and 9-70 torch heads.

Note: W-225 Modular (WP-225) torch requires 195377 connector.

Water-Cooled TIG Torch Connector 195377 50 mm Dinse-style with water return line. For use with all Weldcraft[™] water-cooled torches.



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 194744

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.

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

Setup DVD 251116

Video topics include tungsten selection, setup menus, DC pulse, sequencer, balance and frequency settings.



7



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® 210	907685	Auto-Line™ 120-480 V, 50/60 Hz, CSA. 8 ft. power cord		
Dynasty® 210 (CPS)	907685002	Auto-Line [™] 120-480 V, 50/60 Hz, CSA. 8 ft. power cord		
Dynasty® 210 DX	907686	Auto-Line [™] 120-480 V, 50/60 Hz, CSA. 8 ft. power cord		
Dynasty® 210 DX (CPS)	907686002	Auto-Line [™] 120-480 V, 50/60 Hz, CSA. 8 ft. power cord		
Dynasty® 210 DX (CPS) International	907686003	Auto-Line™ 120-480 V, 50/60 Hz, CE. 8 ft. power cord		
Water-Cooled Packages				
Dynasty® 210 (CPS) TIGRunner®	907685001	Auto-Line [™] 120-480 V, 50/60 Hz, CSA. 8 ft. power cord		
		(Torch kit, accessories and coolant sold separately)		
Dynasty® 210 DX (CPS) TIGRunner®	907686001	Auto-Line™ 120–480 V, 50/60 Hz, CSA. 8 ft. power cord		
	054000	(Torch kit, accessories and coolant sold separately)		
Dynasty® 210 (CPS) Complete w/Foot Control	951666	Auto-Line [™] 120–480 V, 50/60 Hz, CSA . 8 ft. power cord		
Dynasty® 210 (CPS) Complete with Wireless Foot Control	951879	Auto-Line [™] 120-480 V, 50/60 Hz, CSA. 8 ft. power cord		
Dynasty® 210 DX (CPS) Complete w/Foot Control	951668	Auto-Line™ 120-480 V, 50/60 Hz, CSA. 8 ft. power cord		
Dynasty® 210 DX (CPS) Complete with Wireless Foot Control	951880	Auto-Line [™] 120-480 V, 50/60 Hz, CSA. 8 ft. power cord		
Accessories				
Protective Cover	301382	For Dynasty 210/280 and Maxstar 280		
2-Wheel Trolley Cart	300971	See page 7		
Small Runner™ Cart	301318	See page 7		
Coolmate™ 1.3	300972	120 V, 60 Hz, CSA. Requires coolant		
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)		
TIG Gloves		See page 7		
Memory Cards		See page 7		
TIG Torches, Kits and Connectors				
Air-Cooled Contractor Kits		See page 7		
Weldcraft [™] A-150 (WP-17) TIG Torch	WP-17-12-R WP-17-25-R	12 ft. (3.7 m) cable. Requires 195378 connector 25 ft. (7.6 m) cable. Requires 195378 connector		
Weldcraft™ A-200 (WP-26) TIG Torch	WP-26-12-R WP-26-25-R	12 ft. (3.7 m) cable. Requires 195379 connector 25 ft. (7.6 m) cable. Requires 195379 connector		
Air-Cooled TIG Torch Connectors	195378 195379	Connects all air-cooled Weldcraft [™] torches (except A-200) to Dinse-style connector. A-80 (WP-24) torches require 24-5 connector Connects Weldcraft [™] A-200 (WP-26) torch to Dinse-style connector		
Water-Cooled Torch Kits		See page 7		
Weldcraft™ W-225 Modular (WP-225) TIG Torch	WP-225-12-R WP-225-25-R	12 ft. (3.7 m) cable. Requires 195377 connector 25 ft. (7.6 m) cable. Requires 195377 connector		
Water-Cooled TIG Torch Connector	195377	Connects Weldcraft [™] water-cooled torches to Dinse-style connector		
Tungsten		See above		
Remote Controls		See page 7		
Educational Materials		See page 7		

Date:

Distributed by:

Total Quoted Price:

