

Dynasty® 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 115–460 V, 3- or 1-Phase Power

Amperage Range 1–200 A

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

Weight 45 lb. (20.5 kg)



Allows for any input voltage hookup (115–460 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.



Miller recommends
MAXAL
aluminum filler.

**Dynasty 200 DX
Complete Package with
Wireless Foot Control**

Dynasty 200 SD



Lift-Arc™ starting provides x-ray clean welds in AC or DC arc starting without the use of high frequency.

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



Power source is warranted for 3 years, parts and labor.
Original main power rectifier parts are warranted for 5 years.
Coolant system is warranted for 1 year, parts and labor.

AC TIG Features

Extended AC balance (30–99%) controls the amount of oxide cleaning (amperage time in EN) which is essential for high quality welds on aluminum.

AC frequency (20–250 Hz) controls the width of the arc cone and the force of the arc.

AC Waveforms

Advance 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.

Stick Features (AC/DC)

Tailored arc control (DIG) allows the arc characteristic to be changed for specific applications and electrodes. Smooth running 7018 or stiffer, more penetrating 6010.

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

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



Specifications (Subject to change without notice.)



Welding Mode	Welding Amperage Range	Max. Open-Circuit Voltage	Input Power	Rated Output	Amps Input at Rated Load Output, 50/60 Hz						Dimensions	Net Weight
					115 V	230 V	400 V	460 V	KVA	KW		
TIG (GTAW)	AC 5–150 A DC 1–150 A (115 VAC)	80 VDC 5–10 VDC**	3-Phase	200 A at 18 V, 20% Duty Cycle	—	13.7	8.7	6.9	5.5	5.2	H: 13.5 in. (343 mm) W: 7.5 in. (191 mm) D: 17.5 in. (445 mm) with TIGRunner® H: 46.25 in. (1175 mm) W: 23.5 in. (597 mm) D: 22.25 in. (565 mm)	45 lb. (20.5 kg) with Contractor Kit 77 lb. (34.9 kg) with TIGRunner® 137 lb. (62.1 kg)
				150 A at 16 V, 60% Duty Cycle	—	9.4	6.0	4.7	3.8	3.6		
	1-Phase		150 A at 16 V, 60% Duty Cycle	—	15.8	—	7.9	3.6	3.6			
			140 A at 15.6 V, 40% Duty Cycle	31.0 0.42*	—	—	—	3.6	3.5			
			100 A at 14 V, 100% Duty Cycle	20.7 0.42*	—	—	—	2.3	2.3			
Stick (SMAW)	AC 5–105 A DC 1–105 A (115 VAC)	80 VDC 5–10 VDC**	3-Phase	200 A at 28 V, 20% Duty Cycle	—	20.8	13.0	10.2	8.1	7.8		
				130 A at 25.2 V, 60% Duty Cycle	—	12.3	7.6	6.0	4.8	4.6		
	1-Phase		130 A at 25.2 V, 60% Duty Cycle	—	20.0	—	10.0	4.7	4.7			
			100 A at 24 V, 60% Duty Cycle	31.3 0.42*	—	—	—	3.6	3.6			
			90 A at 23.6 V, 100% Duty Cycle	27.6 0.42*	—	—	—	3.2	3.2			

* While idling. ** Sense voltage for Stick and Lift-Arc™ 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. All CE models conform to the applicable parts of the IEC 60974 series of standards.

Performance Data

DUTY CYCLE

110–120 V INPUT VOLTAGE

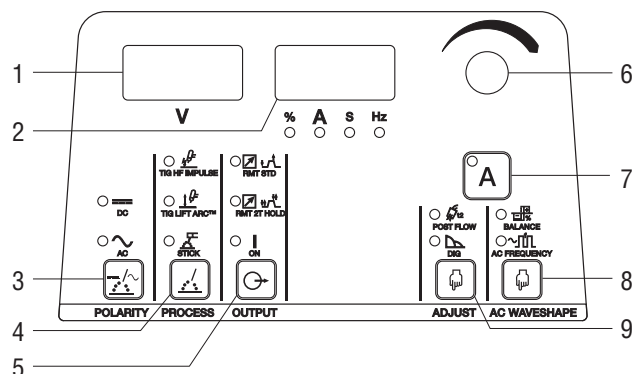
%	TIG	STICK
30%	150 A	100 A
40%	140 A	100 A
60%	120 A	100 A
100%	100 A	90 A

200–460 V INPUT VOLTAGE

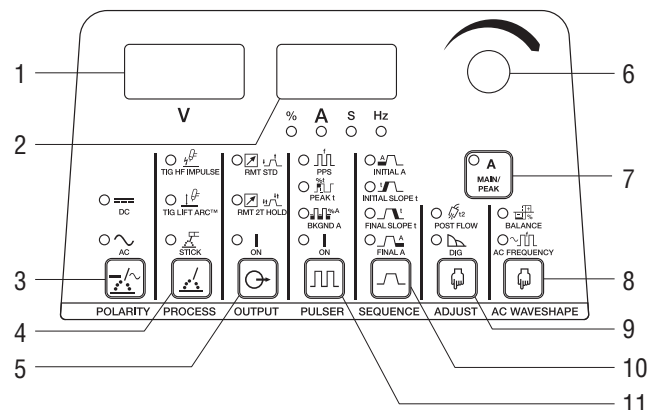
%	TIG	STICK
20%	200 A	200 A
30%	180 A	170 A
40%	166 A	150 A
60%	150 A	130 A
100%	120 A	110 A

Control Panel

Dynasty 200 SD



Dynasty 200 DX



Control Panel Parameter Values

1. Voltmeter Display

2. Ammeter Display

3. Polarity

AC/DC

4. Process/ Arc Starting

TIG: HF Impulse, Lift Arc
STICK: Adaptive Hot Start

5. Output Control

Standard Remote,
2T Trigger Hold,
Output ON

6. Encoder Control

7. Amperage Control

8. AC Waveshape

Balance 30–99%
AC Frequency 20–250 Hz

9. Gas/DIG Preflow

0.0–25.0 seconds

Postflow 0–50 seconds

DIG 0–100%

Advanced Features on the Dynasty DX only:

10. Sequencer Control

Initial Amps AC: 5–200 A
DC: 1–200 A
Initial Slope 0.0–25.0 seconds
Final Slope 0.0–25.0 seconds
Final Amps AC: 5–200 A
DC: 1–200 A

11. Pulser Control

Pulses per Second DC: 0.1–500 PPS
AC: 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 AC: 5–200 A
DC: 1–200 A
Time 1–200 milliseconds
Ramp Time 1–250 milliseconds
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

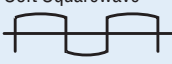
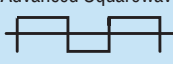
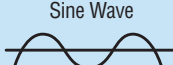
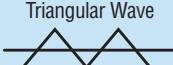
0.0–9999 hours
and 0–59 minutes

Cycle Counter

0–999,999 cycles

TIG Upgrade Chart

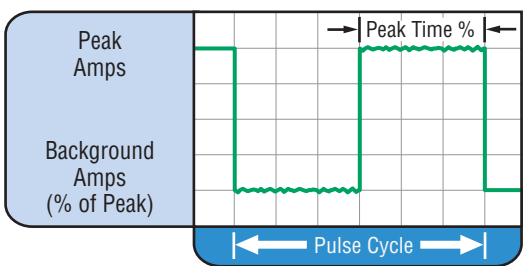
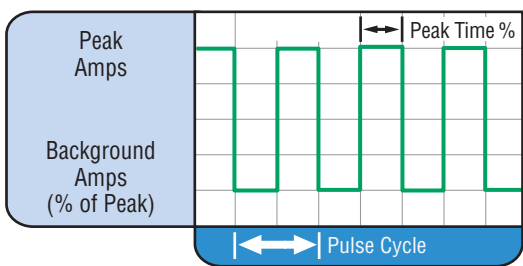
Which Machine is Right for You?

Why Upgrade?	Syncrowave 200	Dynasty 200	Dynasty 200 Benefits
Maximum Thickness Capacity	1/4-in. Aluminum	1/4-in. Aluminum	Same material thickness capacity.
High Frequency Arc Starting	Continuous HF	Start Only	Start Only limits HF interference issues.
Frequency Control AC Output Control	Fixed at 60 Hz	Variable 20–250 Hz	Higher frequencies provide better arc control and faster travel speeds.
AC Waveforms	Soft Squarewave 	Advanced Squarewave  Sine Wave  Triangular Wave 	Advanced Squarewave = Travel faster Soft Squarewave = Maximum puddle control Sine Wave = Traditional characteristics Triangular Wave = Reduced heat input
Weld Aluminum with Pointed Tungsten			Waveshaping controls maintain the point. The benefits are: reduced heat input into your part, smaller weld beads, better starting and more control of the arc.
Portability	238 lb. Manual Link 208–230 or 460–575 V Single-Phase	45 lb. Auto-Line™ 115–460 V Single-Phase or Three-Phase	Easier to move because of size and weight. Auto-Line™ allows the unit to operate on any voltage. Single- or three-phase. Even generators!
Power Draw at 150 Amps	54 A at 230 V Single-Phase	15.8 A at 230 V Single-Phase	Power requirement to operate is much less. Smaller electrical service needed, smaller breaker/fuses and power cord.

Pulse TIG Controls

High Speed DC TIG-Pulse Controls

- **PPS Pulses per second (Hz):** DC = 0.1 – 500 PPS / AC = 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
 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.	 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).

AC Waveshape Controls

Feature	Waveform	Effect on Bead	Effect on Appearance
AC Balance Control Controls arc cleaning action. Adjusting the % EN of the AC wave controls the width of the etching zone surrounding the weld. <i>Note: Set the AC Balance control for adequate arc cleaning action at the sides and in front of the weld puddle. AC Balance should be fine tuned according to how heavy or thick the oxides are.</i>	51 – 99% EN 	Reduces balling action and helps maintain point 	Narrow bead, with no visible cleaning
	30 – 50% EN 	Increases balling action of the electrode 	Wider bead and cleaning action
AC Frequency Control Controls the width of the arc cone. Increasing the AC Frequency provides a more focused arc with increased directional control. <i>Note: Decreasing the AC Frequency softens the arc and broadens the weld puddle for a wider weld bead.</i>	60 Cycles per Second 	Wider bead, good penetration — ideal for buildup work 	Wider bead and cleaning action
	120 Cycles per Second 	Narrower bead for fillet welds and automated applications 	Narrower bead and cleaning action

AC Waveform Selection

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

ADVANCED SQUAREWAVE	SOFT SQUAREWAVE
Fast transitions for responsive and dynamic arc.	All the benefits of advanced square, fine tuned to provide a smooth, soft arc with maximum puddle control and good wetting action.
SINEWAVE	TRIANGULAR WAVE
Square transitions eliminate the need for continuous HF, while the sinewave peaks soften the arc.	Unconventional wave provides the punch of the peak amperage, while reducing overall heat input. Quick puddle formation reduces weld time — limiting heat input and reducing weld distortion, especially on thin materials.

Packages



Dynasty® 200 Power Sources

Dynasty 200 SD #907 099 (CSA)
Dynasty 200 DX #907 099-01-1 (CSA)
Dynasty 200 DX #907 356 (CE)

Includes:

- Adjustable shoulder strap
- 8-ft. (2.4 m) primary power cord

- Two Dinse 50 connectors
- DVD Setup Video (#251 116)
- One air-cooled TIG torch adapter (#195 378)

Note: See page 7 for recommended Contractor Torch Kit.

Dynasty® 200 DX Contractor Kit Packages (Air Cooled)

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

Packages include:

- Dynasty 200 DX (#903 099-01-1)
- RFCS-14 HD foot control (#194 744) or RCCS-14 fingertip control (#043 688)
- Protective carrying case for accessories
- Weldcraft® 25-ft. (7.6 m) WP17 TIG torch with adapter

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



Fingertip contractor kit shown.

TIGRunner® Package (Water Cooled)

Dynasty 200 DX TIGRunner
#907 099-02-1 (CSA)

Completely assembled.

Package includes:

- Dynasty 200 DX (#907 099-01-1)
- Coolmate™ 1, 115 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-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 Adapter must be ordered separately. See page 7 for recommended 250 A Water-Cooled Torch Kit (#300 185).

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



Complete Packages (Water Cooled)

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 (#907 099-01-1)
- Coolmate™ 1, 115 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.
- 250 A Water-Cooled Torch Kit and Accessories (#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.



Dynasty 200 DX Complete Package with Wireless Foot Control

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 local distributor for filler material holders.



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™ 1 #300 360

115 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).



250 A Water-Cooled Torch Kit #300 185

- 25-foot (7.6 m) Weldcraft® WP2025RM torch
- Torch cable cover
- AK4C torch accessory kit includes shielding cups, collets, collet bodies and 2% ceriated tungsten electrodes (1/16, 3/32 and 1/8 inch)
- Regulator/flowmeter HM2051A-580
- Gas hose (regulator to machine)
- Water-cooled Dinse torch adapter
- 15-foot (4.6 m) 1/0 weld lead with clamp (work or ground lead) and Dinse connector



Water-Cooled Dinse #195 377

Used to adapt WP20, WP18, and CS310 to dinse-style connector.



#195 054
kit shown.

Contractor Kits

#195 054 Foot Pedal Kit

#195 055 Fingertip Kit

Includes either RFCS-14HD foot or RCCS-14 fingertip control, 150-amp WP17 TIG torch with adapter and 25-foot (7.6 m) cable, 200-amp Stick electrode holder with 15-foot (4.6 m) #4 cable, work clamp with 15-foot (4.6 m) #4 cable, flow gauge regulator and gas hose, AK2C torch accessory kit (.040-, 1/16-, and 3/32-inch ceriated tungsten, collets and cups), and protective carrying case.



200 Amp Air-Cooled Torch

#WP2612RM (12 ft.)

#WP2625RM (25 ft.)

Torch body gas valve models are available.

Note: Adapter #195 379 required for WP26.



Air-Cooled Torch Adapters

#195 378 WP17, WP9, WP50, WP23

#195 379 WP26

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 fastens to TIG torch using two Velcro® straps. 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 fastens to TIG torch using two Velcro® straps. 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)

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

DVD Setup Video #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™ 115–460 VAC, 50/60 Hz, CSA . 8-ft. primary cord		
Dynasty® 200 DX	#907 099-01-1	Auto-Line™ 115–460 VAC, 50/60 Hz, CSA . 8-ft. primary cord		
Dynasty® 200 DX International	#907 356	Auto-Line™ 115–460 VAC, 50/60 Hz, CE . 8-ft. primary cord		
Air-Cooled Packages				
Dynasty® 200 DX Contractor Kit w/Foot Control	#951 174	Auto-Line™ 115–460 VAC, 50/60 Hz, CSA . 8-ft. primary cord		
Dynasty® 200 DX Contractor Kit w/Fingertip Control	#951 175	Auto-Line™ 115–460 VAC, 50/60 Hz, CSA . 8-ft. primary cord		
Water-Cooled Packages				
Dynasty® 200 DX TIGRunner®	#907 099-02-1	Auto-Line™ 115–460 VAC, 50/60 Hz, CSA . 8-ft. primary cord (Torch kit and accessories sold separately.)		
Dynasty® 200 DX Complete with Wireless Remote Foot Control	#951 397	Auto-Line™ 115–460 VAC, 50/60 Hz, CSA . 8-ft. primary cord		
Dynasty® 200 DX Complete w/Foot Control	#951 139	Auto-Line™ 115–460 VAC, 50/60 Hz, CSA . 8-ft. primary cord		
Dynasty® 200 DX Complete w/Fingertip Control	#951 140	Auto-Line™ 115–460 VAC, 50/60 Hz, CSA . 8-ft. primary cord		
TIG Torch Kits				
Weldcraft® 250 A Water-Cooled Torch Kit	#300 185	See page 7		
Contractor Kit Foot Pedal (Air-Cooled)	#195 054	See page 7		
Contractor Kit Fingertip (Air-Cooled)	#195 055	See page 7		
Weldcraft® 200 A Air-Cooled Torch	#WP2625RM	Adapter #195 379 required.		
Consumables and 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				
2-Wheel Trolley Cart	#300 480	See page 7		
Universal Carrying Cart and Cylinder Rack	#042 934	See page 7		
Coolmate™ 1	#300 360	115 VAC, 60 Hz. <i>Requires coolant</i>		
TIG Coolant	#043 810	Sold in multiples of four in one-gallon plastic bottles		
Water-Cooled Dinse	#195 377	Used to connect water-cooled torch to Dinse terminal machine. For WP20, WP18 and SC310 (adapter included in Complete Package)		
Air-Cooled Dinse	#195 378 #195 379	Used to connect WP17, WP9 and WP23 torch to Dinse terminal machine Used to connect WP26 torch to Dinse terminal machine		
Dinse Connector 50 mm (1 male)	#042 418	Used to connect weld lead to Dinse terminal machine		
Dinse Connector 50 mm (1 male, 1 female)	#042 419	Used to extend weld cables		
Tweco® Terminal Adapter	#042 465	Male Dinse to female Tweco		
Cam-Lok Terminal Adapter	#042 466	Male Dinse to female Cam-Lok		
Gas Tungsten Arc Welding (TIG) Publication	#250 833	To order, call Miller Literature at 866-931-9732 or visit MillerWelds.com/resources/tools		
Ron Covell TIG Welding Basics DVD	#196 567			
DVD Setup Video (included with machine)	#251 116			
Miscellaneous				
Stick Electrodes				
Welding and Work Cables				
Welding Gloves and Helmet				

Date:

Total Quoted Price:

Distributed by:

Weldfabulous.com

Phone: 507-494-5169 Email: Sales@Weldfabulous.com

