

# Dynasty® 280 DX

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Stick/TIG Welding  
Power Source



## Quick Specs



### 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)  
Air Carbon Arc (CAC-A)

**Input Power** 208–575 V, 3- or 1-Phase Power

**Amperage Range** 1–280 A (DC)  
2–280 A (AC)

**Rated Output** 200 A at 28 V, 60% Duty Cycle

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

**Upgradeable and expandable.** Front panel memory card data port provides the ability to easily upgrade software and expand product features.

**Pro-Set™** eliminates the guesswork 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 specific time.

**Auto-Line™ Power Management Technology** allows for any input voltage hookup (208–575 V) with no manual linking, providing convenience in any job setting. Ideal solution for dirty or unreliable power.

**Cooler Power Supply (CPS).** An integrated 120-volt dedicated-use receptacle to power the Coolmate™ 1.3. The power switch on the Dynasty also activates the receptacle to help prevent torch failure.

**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.

**New!**



### Dynasty 280 DX comes complete with:

- Power source
- 3-meter (10 ft.) power cord
- Gas connection kit


### AC TIG Features


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

**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 squarewave**, fast freezing puddle, deep penetration and fast travel speeds.

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

 **Sine wave** for customers that like a traditional arc.

 **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.

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

### 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 additional stability when Stick welding in AC for smoother welds.



Power source is warranted for 3 years, parts and labour.



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FAX: +39 02 98281552  
ITW-Welding.com

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MillerWelds.com

# Specifications (Subject to change without notice.)



Welding Mode	Input Power	Welding Amperage Range	Rated Output	Amps Input at Rated Load Output, 50/60 Hz						Max. Open-Circuit Voltage	Dimensions	Net Weight	
				208 V	230 V	400 V	460 V	575 V	KVA				KW
TIG (GTAW)	3-phase	1–280 A (DC) 2–280 A (AC)	235 A at 19.4 V, 60% duty cycle	19	17	10	9	7	7.0	6.7	60 VDC (11 VDC**)	H: 346 mm (13.6 in.) W: 219 mm (8.6 in.) D: 569 mm (22.5 in.)	25 kg (55 lb.) with CPS
	1-phase	1–280 A (DC) 2–280 A (AC)	235 A at 19.4 V, 60% duty cycle	33	30	17	15	12	6.9	6.8			
Stick (SMAW)	3-phase	5–280 A	200 A at 28 V, 60% duty cycle	22	20	11	10	8	8.2	7.9			
	1-phase	5–280 A	180 A at 27.2 V, 60% duty cycle*	34	31	17	15	12	7.1	7.0			

\* Refer to owner's manual for 208 V output ratings and duty cycle. \*\* Low OCV sense voltage for Stick and Lift-Arc™ TIG.

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.

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

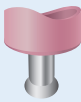
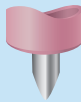
## Coolmate™ 1.3 CE Cooler



- 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
- Efficient fin and tube heat exchanger
- 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	Rated Cooling Capacity	Tank Capacity	Dimensions	Net Weight
115 VAC, 60 Hz	4.7 A (60 Hz)	1470 W (5020 BTU/hr.) 1 L/min. (1.1 qt./min.)	4.9 L (1.3 gal.)	H: 320 mm (12.6 in.) W: 219 mm (8.6 in.) D: 620 mm (24.4 in.)	23.2 kg (51 lb.)

## TIG Upgrade Chart

Why Upgrade?	Syncrowave 250	UPGRADE	Dynasty 280 DX	Dynasty 280 DX Benefits
<b>Thickness Capacity</b>	.015–3/8 in. Aluminum .012–3/8 in. Steel	➔	.012–3/8 in. Aluminum .004–3/8 in. Steel	The Dynasty 280 DX has a lower bottom end, and can weld thinner metals.
<b>Duty Cycle</b>	200 A, 60%	➔	235 A, 60%	Weld longer at higher amperages. At 200 A the Dynasty 280 DX can weld continuously.
<b>High Frequency Arc Starting</b>	Continuous HF	➔	Start Only HF	HF on Start Only limits HF interference issues during the weld.
<b>Precision Controls</b>	Digital and Dial %	➔	All Digital	Precise adjustments allow EN and EP amperage values to be set independently to precisely control heat input to the work and electrode.
<b>Confusion on Where to Set the Controls?</b>	Trial and Error	➔	Pro-Set™ eliminates the guesswork when setting weld parameters.	Select the feature and adjust until Pro-Set appears in display. Pro-Set is available for Balance, Frequency, Pulse and DIG parameters.
<b>AC Frequency Control (Aluminum TIG)</b>	Fixed at 60 Hz	➔	Variable 20–400 Hz	Higher frequencies provide better arc control and faster travel speeds.
<b>AC Balance Control (Aluminum TIG)</b>	45–68% Electrode Negative	➔	50–99% Electrode Negative	Greater electrode negative helps to produce welds with less etching for more aesthetic looking welds.
<b>AC Waveforms (Aluminum TIG)</b>	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
<b>Weld Aluminum with Pointed Tungsten (Aluminum TIG)</b>		➔		Extended Frequency and Balance controls permit welding aluminum with pointed tungsten. The benefits are reduced heat input into your part, smaller weld beads, better starting, more control of the arc and faster travel speeds.
<b>Portability</b>	378 lb. (172 kg) Crane or Cart	➔	52 lb. (23.6 kg) Carry or Cart	Easier to move because of size and weight. Don't have to wait for a crane operator.
<b>Power Flexibility</b>	Manual Link, 208/230/460 V Single-Phase Only	➔	Auto-Line™, 208–575 V Single-Phase or Three-Phase	Auto-Line allows the unit to operate on any voltage. Single- or three-phase. Even generators!
<b>Line Draw at 200 Amps</b>	77 A, 230 V, Single-Phase	➔	25 A, 230 V, Single-Phase 15 A, 230 V, Three-Phase	Line requirement to operate is much less. Smaller electrical service needed, smaller breaker/fuses and power cord.

## Genuine Miller® Accessories



### Small Runner Cart #300 988

Designed for Maxstar 280, Dynasty 280 and STH 270, with or without cooler. Cart features single cylinder rack, cable holder and foot pedal holder.



### MH Running Gear #018 035 026

Designed for Maxstar 280, Dynasty 280 and STH 270, with or without cooler. Easy-to-manuever two-wheel cart with single cylinder rack, cable holder and storage area.



### Coolmate™ 1.3 CE #028 042 108

Designed to integrate with Maxstar 280 and Dynasty 280. For use with water-cooled torches rated up to 280 amps. 4.9-litre (1.3 gal.) capacity.

### Memory Card (Blank) #301 080

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

### Memory Card Expansion

**#301 151** 14-Pin Automation Expansion  
Provides the ability to access common automation functions through the 14-pin connection.

## 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.



### 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.



### RCC-14 Remote Contactor and Current Control #151 086

14-pin plug  
Side-to-side rotary-motion fingertip control fastens to TIG torch using two Velcro® straps.



### RCCS-14 Remote Contactor and Current Control #043 688

14-pin plug  
Up-and-down rotary-motion fingertip control fastens to TIG torch using two Velcro® straps.



### SHRC-14 Remote Control

**#058 040 019** 5 m (16.4 ft.)

**#058 040 020** 10 m (32.8 ft.)

**#058 040 021** 20 m (65.6 ft.)

Single-hand control for current only.



### RHC-14 Hand Control #242 211 020

Miniature hand control for remote current and contactor control.



### Wireless Remote Hand Control #300 430

For remote current and contactor control. Receiver plugs directly into the 14-pin receptacle of Miller machine.



### RMS-14 On/Off Control #187 208

Momentary-contact switch for contactor control. Rubber-covered pushbutton dome switch ideal for repetitive on-off applications.

## Tungsten

Tungsten	Amp Range	2% Ceriated (AC/DC)	2% Lanthanated (AC/DC)
1.6 mm (1/16 in.)	70–150 A	WC116X7	WL2116X7
2.4 mm (3/32 in.)	140–250 A	WC332X7	WL2332X7
3.2 mm (1/8 in.)	225–400 A	WC018X7	WL2018X7
4.0 mm (5/32 in.)	300–500 A	WC532X7	WL2532X7

## Ordering Information

Equipment and Optionse	Stock No.	Description	Qty.	Price
<b>Dynasty® 280 DX with CPS</b>	<b>#907 514 002</b>	Auto-Line™ 208–575 VAC, 50/60 Hz, <b>CE</b> . 2.4-m (8 ft.) primary cord		
<b>Accessories</b>				
Small Runner Cart	<b>#300 988</b>			
MH Running Gear	<b>#018 035 026</b>	MH two-wheeled cart with cylinder rack		
Coolmate™ 1.3 CE	<b>#028 042 108</b>	115 VAC, 60 Hz, <b>CE</b> . <i>Requires coolant</i>		
Blu-Liquid Coolant	<b>#050 024 004</b>	Low conductivity, 10 litres		
Memory Card (Blank)	<b>#301 080</b>			
Memory Card Expansion	<b>#301 151</b> <b>#301 152</b>	14-pin automation expansion 14-pin Modbus® expansion		
Welding Cable Kit, Stick	<b>#058 066 040</b>	200 A, 35 mm <sup>2</sup> , 5 m (16.4 ft.)		
Work Piece Cable	<b>#057 014 148</b> <b>#057 014 149</b>	300 A, 50 mm <sup>2</sup> , 3 m (9.8 ft.) 300 A, 50 mm <sup>2</sup> , 5 m (16.4 ft.)		
TIG Torch				
Tungsten		See page 3		
Helmet				
Gas Hose				
<b>Remote Controls</b>				
Wireless Remote Foot Control	<b>#300 429</b>	Foot control with wireless 27.4-m (90 ft.) operating range		
RFCS-14 HD	<b>#194 744</b>	6 m (20 ft.), heavy-duty foot control		
RCC-14	<b>#151 086</b>	8 m (26.5 ft.), remote current/contactor side-to-side rotary control		
RCCS-14	<b>#043 688</b>	8 m (26.5 ft.), remote current/contactor up-and-down rotary control		
SRHC-14	<b>#058 040 019</b> <b>#058 040 020</b> <b>#058 040 021</b>	5 m (16.4 ft.), single-hand remote control for current only 10 m (32.8 ft.), single-hand remote control for current only 20 m (65.6 ft.), single-hand remote control for current only		
RHC-14	<b>#242 211 020</b>	6 m (20 ft.), remote current/contactor hand control		
Wireless Remote Hand Control	<b>#300 430</b>	Hand control with wireless 91.4-m (300 ft.) operating range		
RMS-14	<b>#187 208</b>	8 m (26.5 ft.), momentary-contact switch for contactor control		

Date:

Total Quoted Price:

Distributed by:

