

Dynasty® 280 DX

TIG/Stick 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, 1- or 3-phase power

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

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.

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

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.

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



See page 4 for package contents

Meter calibration allows digital meters to be calibrated for certification.

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

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.


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.



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



ITW Welding – BV

Edisonstraat 10
P.O. Box 1551
NL-3261 LD Oud-Beijerland,
Netherlands
TEL: +31 (0) 186 641 444
FAX: +31 (0) 186 640 880

International Headquarters Miller Electric Mfg. LLC

An Illinois Tool Works Company
1635 W. Spencer Street
Appleton, WI 54914 USA
TEL: +1 920 735 4554
FAX: +1 920 735 4125
MillerWelds.com

Specifications (Subject to change without notice.)



Welding Mode	Input Power	Welding Amperage Range	Rated Output	IP Rating	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	2–280 A (AC) 1–280 A (DC)	235 A at 19.4 V, 60% duty cycle	IP23	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.)
	1-phase	2–280 A (AC) 1–280 A (DC)	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.

Coolmate™ 1.3



- 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 V, 60 Hz	4.7 A (60 Hz)	1,470 W (5,020 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
Thickness Capacity	.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.
Duty Cycle	200 A, 60%	➔	235 A, 60%	Weld longer at higher amperages. At 200 A the Dynasty 280 DX can weld continuously.
High Frequency Arc Starting	Continuous HF	➔	Start only HF	HF on start only limits HF interference issues during the weld.
Precision Controls	Digital and dial %	➔	All digital	Precise adjustments can be made with all-digital controls for greater quality control and repeatability.
Confusion on Where to Set the Controls?	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.
AC Frequency Control (Aluminum TIG)	Fixed at 60 Hz	➔	Variable 20–400 Hz	Higher frequencies provide better arc control and faster travel speeds.
AC Balance Control (Aluminum TIG)	45–68% electrode negative	➔	50–99% electrode negative	Greater electrode negative helps to produce welds with less etching for more aesthetic looking welds.
AC Waveforms (Aluminum TIG)	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
Weld Aluminum with Pointed Tungsten (Aluminum TIG)		➔		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.
Portability	172 kg (378 lb.), crane or cart	➔	23.6 kg (52 lb.), carry or cart	Easier to move because of size and weight. Don't have to wait for a crane operator.
Power Flexibility	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!
Line Draw at 200 Amps	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 301318

Designed for Maxstar 210/280, Dynasty 210/280, STH 270 and STi 270, with or without cooler. Cart features single cylinder rack, cable holder and foot pedal holder.



MH Running Gear 018035026

Designed for Maxstar 210/280, Dynasty 210/280, STH 270 and STi 270, with or without cooler. Easy-to-maneuver two-wheel cart with single cylinder rack, cable holder and storage area.



Coolmate™ 1.3 300972

Designed to integrate with Maxstar 280 and Dynasty 210/280. For use with water-cooled torches rated up to 280 amps. 4.9 L (1.3 gal.) capacity.

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.

301328 Hot Wire Power Supply Expansion
Provides the ability to access common hot wire TIG power supply functions.

Memory Card (Blank) 301080

Blank memory card for transferring data from computer to machine.

Remote Controls and Switches



Wireless Remote Foot Control 300429

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



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.



RCC-14 Remote Contactor and Current Control 151086

14-pin plug
Side-to-side rotary-motion fingertip control fastens to TIG torch using two hook-and-loop straps.



RCCS-14 Remote Contactor and Current Control 043688

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



SHRC-14 Remote Control

058040019 5 m (16.4 ft.)
058040020 10 m (32.8 ft.)
058040021 20 m (65.6 ft.)
Single-hand control for current only.



RHC-14 Hand Control 242211020

Miniature hand control for remote current and contactor control.



Wireless Remote Hand Control 300430

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



RMS-14 On/Off Control 187208

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 Options	Stock No.	Description	Qty.	Price
Dynasty® 280 DX	907514002	Includes 2.4 m (8 ft.) power cord and gas connection kit		
Dynasty® 280 DX, 4 m Water-Cooled Weld Ready Package	029083160	Includes 2.4 m (8 ft.) power cord, 5 m (16.4 ft.) work cable with clamp, 4 m (13.1 ft.) Miller® WP-280S8AAFD 280 A TIG torch, 3 m (10 ft.) gas hose, 5 m (16.4 ft.) electrode cable with holder, Small Runner™ cart, Coolmate™ 1.3 with coolant, and USB with owner's manuals		
Dynasty® 280 DX, 8 m Water-Cooled Weld Ready Package	029083218	Includes 2.4 m (8 ft.) power cord, 5 m (16.4 ft.) work cable with clamp, 8 m (26.2 ft.) Miller® WP-280S8AAFD 280 A TIG torch, 3 m (10 ft.) gas hose, 5 m (16.4 ft.) electrode cable with holder, Small Runner™ cart, Coolmate™ 1.3 with coolant, and USB with owner's manuals		
Accessories				
Small Runner™ Cart	301318			
MH Running Gear	018035026	MH two-wheeled cart with cylinder rack		
Coolmate™ 1.3	300972	115 V, 60 Hz, CE . <i>Requires coolant</i>		
Adapter Cord	255814	Supplies power to 115 V cooler (<i>not required for Coolmate 1.3</i>)		
Industrial Coolant	043810	3.78-liter plastic bottle (<i>must be ordered in quantities of 4</i>)		
Memory Card Expansion	301151 301152 301328	14-pin automation expansion 14-pin Modbus® expansion Hot wire power supply expansion		
Memory Card (Blank)	301080			
Stick Welding Cable Kit	058066040	200 A, 35 mmq, 5 m (16.4 ft.)		
Work Cable with Clamp	057014148 057014149	300 A, 50 mmq, 3 m (9.8 ft.) 300 A, 50 mmq, 5 m (16.4 ft.)		
TIG Torch				
Tungsten		See page 3		
Helmet				
Gas Hose				
Remote Controls				
Wireless Remote Foot Control	300429	Foot control with wireless 27.4 m (90 ft.) operating range		
RFCS-14 HD	194744	6 m (20 ft.), heavy-duty foot control		
RCC-14	151086	8 m (26.5 ft.), remote current/contacter side-to-side rotary control		
RCCS-14	043688	8 m (26.5 ft.), remote current/contacter up-and-down rotary control		
SRHC-14	058040019 058040020 058040021	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	242211020	6 m (20 ft.), remote current/contacter hand control		
Wireless Remote Hand Control	300430	Hand control with wireless 91.4 m (300 ft.) operating range		
RMS-14	187208	8 m (26.5 ft.), momentary-contact switch for contactor control		

Date:

Total Quoted Price:

Miller recommends  consumables

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