

Dynasty® 300 Series

**Multiprocess 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)
MIG/MAG (GMAW)

Input Power

208-600 V, 3-phase
or 1-phase power

Welding Output

1-300 A (DC) • 2-300 A (AC)

Output Range

300 A at 35% duty cycle

Net Weight

25 kg

Reimagined for Your Pursuit of Perfection.

Experience unfailing 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.

NEW!



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
water cooled Tigrunner package**

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).

MIG/MAG (GMAW) Mode

allow the operator to attach and run a suitcase feeder off the power source for high productivity welding.



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.

Blue Lightning™

provides more consistent high-frequency (HF) arc starts and greater reliability compared to traditional arc starters.

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.



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
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 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.

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: 352 mm W: 216 mm D: 555 mm	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."

 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%	0.3-9.5 mm	0.1-9.5 mm	6010: 6.4 mm 7018: 5.6 mm 7024: 4.8 mm	4.8 mm	12.5 kW
208-240V	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 (60 Hz) 4.7 A (50 Hz)	3.400 W (11,600 Btu/hr.) 3.8 qt./min. (3.6 L/min)	1.330 W (4,540 Btu/hr.) 1.06 qt./min. (1 L/min.)	4.9 L	H: 289 mm W: 264 mm D: 616 mm	21 kg

Genuine Miller® Accessories



4-wheel Small Running Gear 058035010

Designed for Maxstar 210/280, Dynasty 210/300, STH 270 and STI 270, with or without cooler. Cart features single cylinder rack, cable holder and foot pedal holder.



2-wheel Trolley 058035012

Designed for Maxstar 210/280, Dynasty 210/300, STH 270 and STI 270, with or without cooler. Easy-to-maneuver two-wheel cart with single cylinder rack, cable holder and storage area.

Cooler and Coolant



Coolmate™ 1.3 301617
Designed to integrate with Maxstar 280 and Dynasty 210/300. 4.9 L capacity.



Low-Conductivity Coolant 043810

Sold in 3.8 liter recyclable plastic bottles. Miller coolants contain a base of ethylene glycol and deionized water to protect against freezing to -38°C or boiling to 108°C. Also contains a compound that resists algae growth.

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. 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 6 m cord and 14-pin plug.



RHC-14 Hand Control 242211020

Miniature hand control for remote current and contactor control. Dimensions: 102 x 102 x 83 mm. Includes 6 m cord and 14-in plug.



Wireless Remote Hand Control 301582

For remote current and contactor control. Receiver plugs directly into the 14-pin receptacle of Miller machine. 91.4 m operating range.



SHRC-14 Remote Control

058040019 5 m
058040020 10 m
058040021 20 m

Single-hand control for current only.

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.

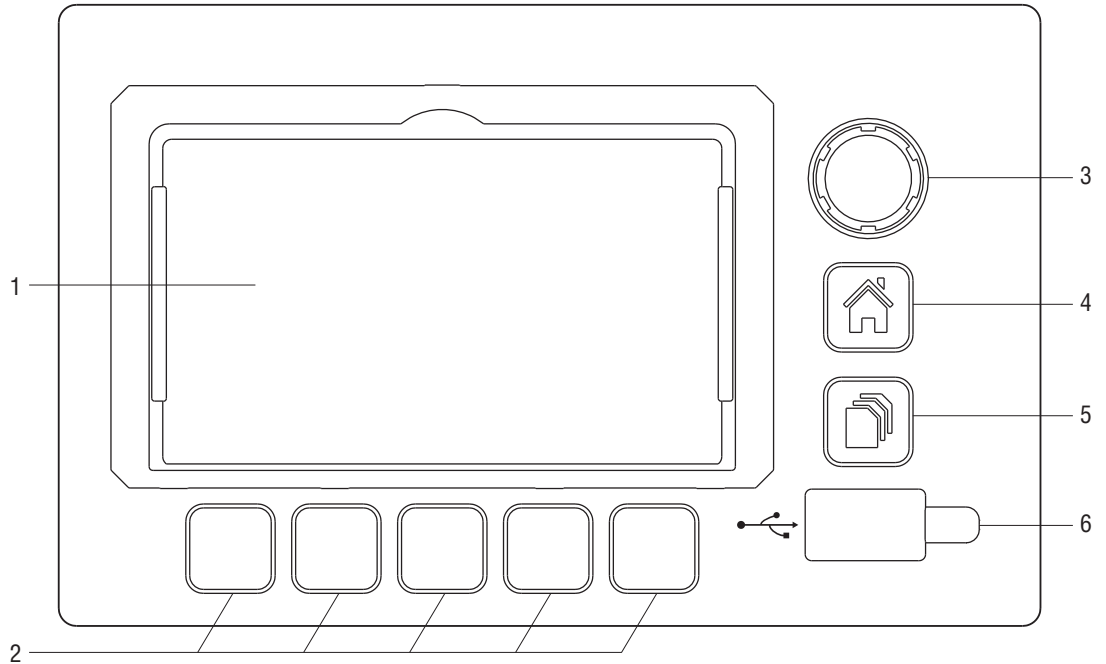
301328 Hot Wire Power Supply Expansion
Provides the ability to access common hot wire TIG power supply functions.

Memory Card (Blank) 301080

Blank memory card for transferring data from computer to machine.

Dynasty® 300 Control Panel

1. Color LCD
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

0.5, 1.0, 1.6, 2.4, 3.2 mm, General

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.

Wire Feeders and MIG Guns






Dynasty® 300 DX Multiprocess
with Coolmate™ 1.3 and ArcReach® SuitCase® 12

ArcReach® SuitCase® 8 and ArcReach® SuitCase® 12

The extremely durable Miller suitcase feeders are available in two different sizes. The smaller model is designed for maximum portability, capable of carrying a 200 mm spool of wire. The larger model can hold a 300 mm spool.

Consumables

	Drive Rolls <i>Select drive rolls from chart according to type and wire size being used.</i>		
	"V" groove for hard wire 	"U" groove for soft wire or soft-shelled cored wires 	"V" knurled for hardshelled cored wires 
Individual Rolls			
0.6 mm	087130	-	-
0.8 mm	053695	-	-
0.9 mm	053700	072000	132958
1.0 mm	053696	-	-
1.1/1.2 mm	053697	053701	132957
1.3/1.4 mm	053698	053702	132956
1.6 mm	053699	053706	132955
2.0 mm	-	053704	132960

Mig guns – Miller® EuroGun line

Stock No.	EuroGun	Air	Euro connector	3 meter	4.5 meter	Rating CO ₂ gas (A)	Rating Mix gas (A)	Duty cycle (%)
058023005	A-300	●	●	●	-	300	250	100
058023006	A-300	●	●	-	●	300	250	100

A – air cooled



TIG Torch Kits and Connectors

The Miller® TIG torches have been designed to perfectly match and to ensure that the welder can fully benefit from the superior arc quality of the Miller® TIG equipment. The material has been carefully selected to prevent ageing and leakage in the hoses and cables. Miller® uses more copper in the power cable to minimize the heat losses and maximize the output. The TIG torches can be configured with a standard torch head or a flexible alternative. The ergonomic handle can also be fitted with a remote control for adjustment of the weld current at the point of welding.

Miller® recommends Miller®|Weldcraft® 2% lanthanated tungsten electrode. The blue electrode ensures a stable arc in both AC and DC processes, with greater longevity than conventional tungsten electrodes, the ability to use a smaller-diameter electrode for the same job, use of a higher current for a similar-sized electrode, and less tungsten spitting.



Torch	Stock No.	Technical description	DC current	AC current
EuroTorch A-125, 4 meter	058022031	50 mm ² Dinse, 5/8" gas, 14 pin control	125A @ 60%	100A @ 60%
EuroTorch A-150, 4 meter	058022021	50 mm ² Dinse, 5/8" gas, 14 pin control	150A @ 60%	125A @ 60%
EuroTorch A-200, 4 meter	058022013	50 mm ² Dinse, 5/8" gas, 14 pin control	200A @ 60%	150A @ 60%
EuroTorch A-200F, 4 meter	058022014	50 mm ² Dinse, 5/8" gas, 14 pin control	200A @ 60%	150A @ 60%
EuroTorch A-200, 8 meter	058022015	50 mm ² Dinse, 5/8" gas, 14 pin control	200A @ 60%	150A @ 60%
EuroTorch A-200F, 8 meter	058022016	50 mm ² Dinse, 5/8" gas, 14 pin control	200A @ 60%	150A @ 60%
EuroTorch A-200R, 4 meter	058022017	50 mm ² Dinse, 5/8" gas, 14 pin control	200A @ 60%	150A @ 60%
EuroTorch A-200FR, 4 meter	058022018	50 mm ² Dinse, 5/8" gas, 14 pin control	200A @ 60%	150A @ 60%
EuroTorch A-200R, 8 meter	058022019	50 mm ² Dinse, 5/8" gas, 14 pin control	200A @ 60%	150A @ 60%
EuroTorch A-200FR, 8 meter	058022020	50 mm ² Dinse, 5/8" gas, 14 pin control	200A @ 60%	150A @ 60%
EuroTorch W-250F, 4 meter	058022006	50 mm ² Dinse, 5/8" gas, 14 pin control	250A @ 100%	175A @ 100%
EuroTorch W-250FR, 4 meter	058022010	50 mm ² Dinse, 5/8" gas, 14 pin control	250A @ 100%	175A @ 100%
EuroTorch W-250F, 8 meter	058022008	50 mm ² Dinse, 5/8" gas, 14 pin control	250A @ 100%	175A @ 100%
EuroTorch W-250FR, 8 meter	058022012	50 mm ² Dinse, 5/8" gas, 14 pin control	250A @ 100%	175A @ 100%
EuroTorch W-270, 4 meter	058022005	50 mm ² Dinse, 5/8" gas, 14 pin control	270A @ 100%	190A @ 100%
EuroTorch W-270R, 4 meter	058022009	50 mm ² Dinse, 5/8" gas, 14 pin control	270A @ 100%	190A @ 100%
EuroTorch W-270, 8 meter	058022007	50 mm ² Dinse, 5/8" gas, 14 pin control	270A @ 100%	190A @ 100%
EuroTorch W-270R, 8 meter	058022011	50 mm ² Dinse, 5/8" gas, 14 pin control	270A @ 100%	190A @ 100%
EuroTorch W-350, 4 meter	058022001	50 mm ² Dinse, 5/8" gas, 14 pin control	350A @ 100%	250A @ 100%
EuroTorch W-350R, 4 meter	058022002	50 mm ² Dinse, 5/8" gas, 14 pin control	350A @ 100%	250A @ 100%
EuroTorch W-350, 8 meter	058022003	50 mm ² Dinse, 5/8" gas, 14 pin control	350A @ 100%	250A @ 100%
EuroTorch W-350R, 8 meter	058022004	50 mm ² Dinse, 5/8" gas, 14 pin control	350A @ 100%	250A @ 100%

R - Remote control | F - Flex neck | W - Water cooled | A - Air cooled

Tungsten

Tungsten	Amp Range	2% Ceriated (AC/DC)	2% Lanthanated (AC/DC)
1.6 mm	70-150 A	WC116X7	WL2116X7
2.4 mm	140-250 A	WC332X7	WL2332X7
3.2 mm	225-400 A	WC018X7	WL2018X7
4.0 mm	300-500 A	WC532X7	WL2532X7

Ordering Information

Equipment and Options	Stock No.	Description	Qty.	Price
Dynasty® 300 Multiprocess	907819002			
Dynasty® 300 Multiprocess TIGrunner	907816003	Includes, all assembled, the power source, cooler and running gear		
Coolmate™ 1.3	301617	Requires coolant, stock number 043810		
ArcReach® SuitCase® feeder 200 mm	301457	Dinse-style connectors, including drive rolls (weight 13 kg)		
ArcReach® SuitCase® feeder 300 mm	301456	Dinse-style connectors, including drive rolls (weight 16 kg)		
Interconnection Cables				
Interconnection cable 5 m	058019294	Air cooled, power cable, gas hose and rubber sleeve cover		
Interconnection cable 10 m	058019295			
Accessories				
4-wheel Small Running Gear	058035010	Four-wheeled cart with cylinder rack		
Side bracket support for suitcase feeder	156031089			
Industrial Coolant	043810	3.8-liter plastic bottle		
Memory Card Expansion	301151	14-pin automation expansion		
	301152	14-pin Modbus® expansion		
	301328	Hot wire power supply expansion		
Memory Card (Blank)	301080			
Stick Welding Cable Kit	057014354	Electrode holder kit 300 A, 50 mm², 5 m		
Work Cable with Clamp	057014335	Return cable kit 300 A, 50 mm², 5 m		
Miller® EuroTorch		See page 6		
Miller® EuroGun		See page 5		
Remote Controls				
Wireless Remote Foot Pedal	301580	Wireless foot pedal (range: 27 m)		
Wireless Remote Hand Control	301582	Wireless hand control (range: 90 m)		
RFC-14 Heavy Duty Remote Foot Pedal	194744	Wired foot pedal (range: 6 m)		
RHC-14	242211020	Wired hand control (range: 6 m)		
SRHC-14	058040019	Single-hand remote control for current only, 5 m		
	058040020	Single-hand remote control for current only, 10 m		
	058040021	Single-hand remote control for current only, 20 m		
RMS-14	187208	Momentary-contact switch for contactor control, 8 m		
RCC-14	151086	Remote current/contactor side-to-side rotary control, 8 m		
RCCS-14	043688	Remote current/contactor up-and-down rotary control, 8 m		

Date:

Total Quoted Price:

Miller recommends *Elega* consumables

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