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Dynasty® 400 and 800

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
TIG (GTAW)
Pulsed TIG (GTAW-P)
Stick (SMAW)
Air carbon arc (CAC-A)
400: 6 mm maximum
800: 10 mm maximum

Input Power 208–600 V, 3-phase or 1-phase power
Amperage Range **400:** 3–400 A
800: 5–800 A
Rated Output **400:** 300 A at 32 V, 60% duty cycle
800: 600 A at 44 V, 60% duty cycle
Net Weight **400:** 57 kg (126 lb.)
800: 91 kg (201 lb.)

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.

Easy-to-understand interface with 7-inch LCD display.

- Ensures proper machine setup and parameter selection.
- Informative on-screen explanations and dynamic images enhance the parameter selection process.

Dynasty 400 machine only

Dynasty 400 Tigrunner

WIRELESS REMOTE COMPATIBLE

QUIETPULSE™

Activate QuietPulse by selecting sine or triangular waveshape to reduce audible noise.

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

Lift-Arc™ provides AC or DC arc initiation without the use of high frequency.

AUTO-LINE™ TECHNOLOGY

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.

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).

TRUE BLUE® 3YR. WARRANTY

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

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™ 3.5.

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

Miller®

Weld Process Features

AC TIG

Balance control provides adjustable oxide removal — essential for creating the highest quality aluminum welds. These models provide extended ranges.

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. Pulsing can increase puddle agitation, arc stability and travel speeds while reducing heat input and distortion. These models provide extended ranges.

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.

QuietPulse.™ Activate QuietPulse by selecting sine or triangular waveshape to reduce audible noise.

AC/DC Stick

DIG control allows the arc charac teristics 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.)

Model	Input Power	Welding Amperage Range	Rated Output	Amps Input at Rated Load Output, 50/60 Hz 208 V	230 V	400 V	460 V	600 V	KVA	KW	Max. Open-Circuit Voltage	Dimensions	Net Weight
Dynasty 400	3-phase	3–400 A	250 A at 30 V, 100% duty cycle	28	26	14	13	10	10.3	9.8	75 VDC (10–15 VDC*)	H: 613 mm W: 352 mm D: 559 mm	57 kg
			300 A at 32 V, 60% duty cycle	36	33	19	16	12	13.1	12.5			
	1-phase	3–400 A	200 A at 27.2 V, 100% duty cycle	39	35	19	17	12	8.2	7.5		**with TIGRunner®** H: 1095 mm W: 587 mm D: 1057 mm	112 kg
			250 A at 29 V, 60% duty cycle	52	47	26	22	16	10.9	9.9			
Dynasty 800	3-phase	5–800 A	500 A at 40 V, 100% duty cycle	73	66	37	32	24	26	25	75 VDC (10–15 VDC*)	H: 870 mm W: 352 mm D: 618 mm	91 kg
			600 A at 44 V, 60% duty cycle	96	86	48	42	32	35	33			
	1-phase	5–800 A	400 A at 34 V, 100% duty cycle	98	88	48	41	31	20	19		**with TIGRunner®** H: 1337 mm W: 587 mm D: 1057 mm	145 kg
			500 A at 40 V, 60% duty cycle	136	122	66	56	42	28	26			

CE *All CE models conform to the applicable parts of the IEC 60974 series of standards.*

**Indicates sense-voltage for Lift-Arc™ TIG and low OCV stick.*

Performance Data

Model	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
Dynasty 400	3-phase	400 A, 20% 300 A, 60% 250 A, 100%	400 A, 20% 300 A, 60% 250 A, 100%	0.38–15.9 mm	0.3–15.9 mm	6010: 6.4 mm 7018: 6.4 mm 7024: 6.4 mm	6.4 mm	20 kVA
	1-phase	300 A, 20% 250 A, 60% 200 A, 100%	300 A, 20% 250 A, 60% 200 A, 100%					
Dynasty 800	3-phase	800 A, 20% 600 A, 60% 500 A, 100%	700 A, 20% 600 A, 60% 500 A, 100%	0.5–25.4 mm	0.5–25.4 mm	6010: 6.4 mm 7018: 6.4 mm 7024: 6.4 mm	9.5 mm	50 kVA
	1-phase	500 A, 60% 400 A, 100%	500 A, 60% 400 A, 100%					

Dynasty® 400 and 800 Control Panel

1. Color LCD Display

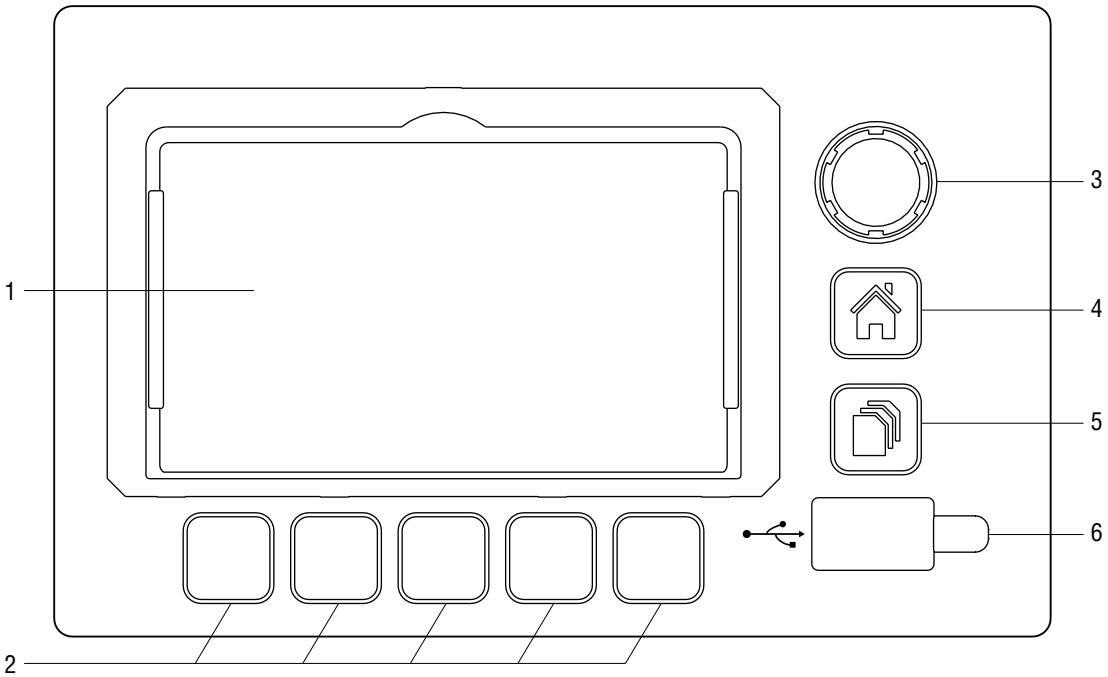
2. Soft Keys
(Multiple functions depending on screen displayed.)

3. Control Knob
(Adjusts amperage or parameter values depending on mode.)

4. Home Button

5. Program Button

6. USB Port



Amperage		
TIG AC	**400:** 3–400 A**	**800:** 5–800 A**
TIG DC	**400:** 3–400 A**	**800:** 5–800 A**
Stick	**400:** 3–400 A	**800:** 5–800 A
Process	AC TIG HF, DC TIG HF, AC TIG Lift-Arc™, DC TIG Lift-Arc™, AC Stick, DC Stick, Carbon Arc Gouge, Hotwire	
Tungsten (mm)	0.5, 1.0, 1.6, 2.4, 3.2, 4.0, 4.8, General	
Trigger	Remote Standard: Foot, Finger, Pushbutton Sequencer: Pushbutton Hold (2T), 3T 4T, 4TE, 4TL, 4TM	
Pulse		
Pulses per Second*	DC: 0.1–5,000 pps AC: 0.1–5,000 pps	
Peak Time* 5–95%	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: **400:** 3–400 A** **800:** 5–800 A** EP Amperage: **400:** 3–400 A** **800:** 5–800 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	**400:** 3–400 A**	**800:** 5–800 A**
Initial Amps DC	**400:** 3–400 A**	**800:** 5–800 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	**400:** 3–400 A**	**800:** 5–800 A**
Final Amps DC	**400:** 3–400 A**	**800:** 5–800 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.*

TIG Torch Kits and Connectors for Dynasty® 400

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 Dynasty®. 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.

The torches come equipped with a 2.4 mm 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.

**Remote current control from the thumb wheel, available as an option on all models*

Torch	Stock No.	Technical description	DC current	AC current
EuroTorch W-350, 4 meter	058022001	50 mm² Dinse, 5/8" gas, Water quick connect, 14 pin control	350A @ 100%	250A @ 100%
EuroTorch W-350R, 4 meter	058022002	50 mm² Dinse, 5/8" gas, Water quick connect, 14 pin control	350A @ 100%	250A @ 100%
EuroTorch W-350, 8 meter	058022003	50 mm² Dinse, 5/8" gas, Water quick connect, 14 pin control	350A @ 100%	250A @ 100%
EuroTorch W-350R, 8 meter	058022004	50 mm² Dinse, 5/8" gas, Water quick connect, 14 pin control	350A @ 100%	250A @ 100%
EuroTorch W-270, 4 meter	058022005	50 mm² Dinse, 5/8" gas, Water quick connect, 14 pin control	270A @ 100%	190A @ 100%
EuroTorch W-250F, 4 meter	058022006	50 mm² Dinse, 5/8" gas, Water quick connect, 14 pin control	250A @ 100%	175A @ 100%
EuroTorch W-270, 8 meter	058022007	50 mm² Dinse, 5/8" gas, Water quick connect, 14 pin control	270A @ 100%	190A @ 100%
EuroTorch W-250F, 8 meter	058022008	50 mm² Dinse, 5/8" gas, Water quick connect, 14 pin control	250A @ 100%	175A @ 100%
EuroTorch W-270R, 4 meter	058022009	50 mm² Dinse, 5/8" gas, Water quick connect, 14 pin control	270A @ 100%	190A @ 100%
EuroTorch W-250FR, 4 meter	058022010	50 mm² Dinse, 5/8" gas, Water quick connect, 14 pin control	250A @ 100%	175A @ 100%
EuroTorch W-270R, 8 meter	058022011	50 mm² Dinse, 5/8" gas, Water quick connect, 14 pin control	270A @ 100%	190A @ 100%
EuroTorch W-250FR, 8 meter	058022012	50 mm² Dinse, 5/8" gas, Water quick connect, 14 pin control	250A @ 100%	175A @ 100%
EuroTorch A-125, 4 meter	058022031	50 mm² Dinse, 5/8" gas, 14 pin control	125A @ 60%	100A @ 60%
EuroTorch A-150, 4 meter	058022021	50 mm² Dinse, 5/8" gas, 14 pin control	150A @ 60%	115A @ 60%
EuroTorch A-200, 4 meter	058022013	50 mm² Dinse, 5/8" gas, 14 pin control	200A @ 60%	150A @ 60%
EuroTorch A-200F, 4 meter	058022014	50 mm² Dinse, 5/8" gas, 14 pin control	200A @ 60%	150A @ 60%
EuroTorch A-200, 8 meter	058022015	50 mm² Dinse, 5/8" gas, 14 pin control	200A @ 60%	150A @ 60%
EuroTorch A-200F, 8 meter	058022016	50 mm² Dinse, 5/8" gas, 14 pin control	200A @ 60%	150A @ 60%
EuroTorch A-200R, 4 meter	058022017	50 mm² Dinse, 5/8" gas, 14 pin control	200A @ 60%	150A @ 60%
EuroTorch A-200FR, 4 meter	058022018	50 mm² Dinse, 5/8" gas, 14 pin control	200A @ 60%	150A @ 60%
EuroTorch A-200R, 8 meter	058022019	50 mm² Dinse, 5/8" gas, 14 pin control	200A @ 60%	150A @ 60%
EuroTorch A-200FR, 8 meter	058022020	50 mm² Dinse, 5/8" gas, 14 pin control	200A @ 60%	150A @ 60%

R – Remote control F – Flex neck W – Water cooled A – Air cooled

Genuine Miller® Accessories

Runner™ Cart
included into each Tigrunner
Designed to accommodate Dynasty 400/800 or Maxstar 400 power sources and a Coolmate™ 3.5 Cooler. Cart features single cylinder rack, foot pedal holder, three cable/torch holders, and two TIG electrode filler holders.

Coolmate™ 3.5
301788 120 V, 50/60 Hz, **CE**
301789 120 V, 50/60 Hz, **CE** with quick connect
Industrial 3.5-gallon cooler for use with water-cooled torches rated up to 600 amps. Designed to integrate with the Dynasty 400/800 and Maxstar 400 power sources.

Low-Conductivity TIG Coolant 043810
Must be ordered in quantities of four. One-gallon recyclable plastic bottle. Miller coolants contains a base of ethylene glycol and deionized water to protect against freezing to -38°C or boiling to 108°C.

Automation Interface Connection Kit
278161 Field
Provides control of power source welding parameters through a 28-pin receptacle. The 28-pin receptacle replaces the standard 14-pin receptacle and requires a PLC controller to operate the power source. Ideal for automated equipment integration.

Weld Current Sensor 300179 Field
Detects when work clamp is not connected and prevents expensive damage to disconnect devices and input power cord and wiring.

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 301589
Heavy-duty foot pedal current and contactor control provides increased stability and durability from larger base and heavier cord. Includes 6 m cord with plug.

RHC-14 Hand Control 242211020
Miniature hand control for remote current and contactor control. Dimensions: 102x102x83 mm. Includes 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. 91.4 m operating range.

Extension Cables for
14-Pin Remote Controls
242208025 7.6 m
242208050 15.2 m
242208080 24.4 m

Tungsten

2% Ceriated (EWCe-2)		
Type	**Ø mm (in.)**	**Stock No.**
Performs well in DC welding and arc starting at low current settings and offers excellent performance in AC Processes.	1.6 (1/16")	WC116X7
	2.4 (3/32")	WC332X7
	3.2 (1/8")	WC018X7
	4.0 (5/32")	WC532X7

2% Lanthanated (EWLa-2)		
Type	**Ø mm (in.)**	**Stock No.**
Provides excellent arc starting, arc stability and re-ignition and less tip erosion in AC or DC welding. Can substitute for 2% Thoriated.	1.6 (1/16")	WL2116X7
	2.4 (3/32")	WL2332X7
	3.2 (1/8")	WL2018X7
	4.0 (5/32")	WL2532X7

Rare Earth (EWG)		
Type	**Ø mm (in.)**	**Stock No.**
Combines the best of all alloying elements and provides excellent arc stability in AC or DC welding.	1.6 (1/16")	WG116X7
	2.4 (3/32")	WG332X7
	3.2 (1/8")	WG018X7

Ordering Information

Equipment and Options	Stock No.	Description	Qty.	Price
Dynasty® 400	**907858002**	Auto-Line™ 380–600 V, 50/60 Hz, **CE**		
Dynasty® 400 TIGRunner	**907858003**	Auto-Line™ 380–600 V, 50/60 Hz, **CE**		
Dynasty® 800	**907859002**	Auto-Line™ 380–600 V, 50/60 Hz, **CE**		
Dynasty® 800 TIGRunner	**907859003**	Auto-Line™ 380–600 V, 50/60 Hz, **CE**		
TIG Torches		See page 5		
Tungsten		See page 7		
Accessories				
4 wheel runner large	**058035011**			
Coolmate™ 3.5	**301789**	120 V, 50/60 Hz, CE with quick connect. *Requires coolant*		
TIG Coolant (must be ordered in quantities of four)	**043810**	3.8l plastic bottle. Protects against freezing to -38°C or boiling to 108°C		
Automation Interface Kit	**278161**	Field installation required. Provides 28-pin automation connections		
Weld Current Sensor	**300179**	Field installation required. Detects when work clamp is not connected		
Remote Controls				
Wireless Remote Foot Control	**301580**	Foot control with wireless 27.4 m operating range		
RFCS-14 HD	**301589**	Heavy-duty foot control		
RHC-14	**242211020**	Hand control		
Wireless Remote Hand Control	**301582**	Hand control with wireless 91.4 m operating rang		
Extension Cables		See page 6		

Date: **Total Quoted Price:**

Miller® recommends Elga® consumables

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The Power of Blue®