

Dynasty[®] 210 Series

Issued December 2022 • Dynasty 210 Rev. 01/UK

TIG/Stick 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)

Input Power

120–480 V, 3-phase
or 1-phase power

Welding Output

1–210 A (DC) • 2–210 A (AC)

Output Range

210 A at 18.4 V, 35% duty cycle

Net Weight

21.3 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 210
Machine only**



**Dynasty 210
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).



Allows for any input voltage hookup (120–480 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 | Phase | Amps Input at Rated Load Output, 50/60 Hz | | | | | | | | Max. Open-Circuit Voltage | Dimensions | Net Weight |
|--------------|-------------|------------------------------|--------------------------------|---------|---|-------|-------|-------|-------|-----|-----|---------------------|-------------------------------------|---------------------------------|------------|
| | | | | | 120 V | 208 V | 240 V | 400 V | 480 V | KVA | KW | | | | |
| TIG (GTAW) | 208-480 V | 2-210 A (AC) 1-210 A (DC) | 210 A at 18.4 V | 3-phase | — | 16 | 14 | 8 | 7 | 5.7 | 5.2 | 80 VDC (30 VDC*) | H: 352 mm W: 216 mm D: 555 mm | 21.3 kg 22.7 kg with CPS | |
| | 120 V | 2-150 A (AC) 1-150 A (DC) | 125 A at 15 V | 1-phase | 26 | — | — | — | — | 2.8 | 2.7 | | | | |
| | 208-480 V | 5-210 A | 160 A at 26.4 V | 3-phase | — | 16 | 14 | 9 | 8 | 6.0 | 5.8 | | | | |
| Stick (SMAW) | 120 V | 5-100 A | 90 A at 23,6 V | 1-phase | 27 | — | — | — | — | 2.9 | 2.8 | | | | |
| | 208-480 V | 5-210 A | 160 A at 26.4 V | 1-phase | — | 28 | 24 | 14 | 12 | 6.4 | 5.5 | | | | |
| | 120 V | 5-100 A | 90 A at 23,6 V | 1-phase | — | 28 | 24 | 14 | 12 | 6.4 | 5.5 | | | | |

*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 | Generator Requirement |
|-------------|---|---|---------------------------------|---------------------------------|--|-----------------------|
| 208-480 V | 210 A, 60% 175 A, 100% | 210 A, 30% 160 A, 60% 125 A, 100% | 0.3-6.4 mm | 0.05-6.4 mm | 6010: 4.8 mm 7018: 4.0 mm 7024: 4.0 mm | 9 kW |
| 120 V | 150 A, 40% 125 A, 60% 100 A, 100% | 100 A, 40% 90 A, 60% 75 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.

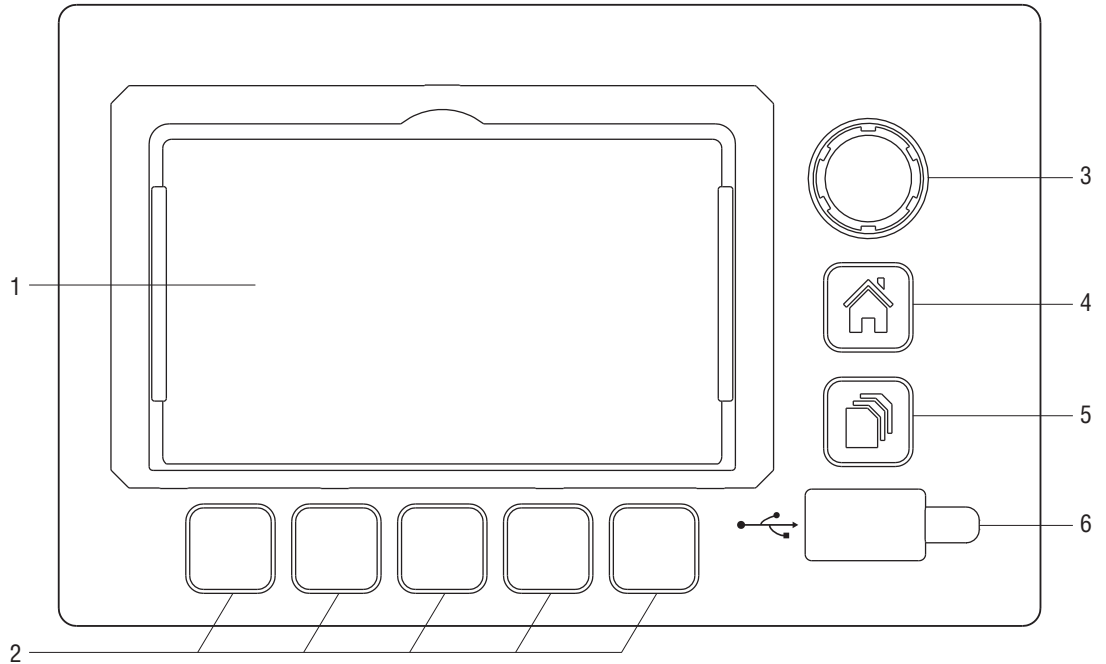
301328 Hot Wire Power Supply Expansion
Provides the ability to access common hot wire TIG power supply functions.

Memory Card (Blank) 301080

Blank memory card for transferring data from computer to machine.

Dynasty® 210 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- 210 A** |
| TIG DC | 1- 210 A** |
| Stick | 5- 210 A |

Process

AC TIG HF, DC TIG HF,
AC TIG Lift-Arc™, DC TIG Lift-Arc™,
AC Stick, DC Stick

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- 210 A** EP Amperage: 2- 210 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- 210 A** DC: 1- 210 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- 210 A** DC: 1- 210 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

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% |

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® 210 | 907816003 | | | |
| Dynasty® 210 TIGRunner | 907816004 | Includes, all assembled, the power source, cooler and running gear | | |
| Torches | | See page 5 | | |
| Accessories | | See page 3 | | |
| 4-wheel Small Running Gear | 058035010 | Four-wheeled cart with cylinder rack | | |
| 2-wheel Trolley | 058035012 | Two-wheeled cart with cylinder rack | | |
| Coolmate™ 1.3 | 301617 | 115 V, 60 Hz, CE. <i>Requires coolant</i> | | |
| Industrial Coolant | 043810 | 3.8-liter plastic bottle | | |
| 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 | 057014351 | Electrode holder kit 200 A, 35 mm², 5 m | | |
| Work Cable with Clamp | 057014331 | Return cable kit 200 A, 35 mm², 5 m | | |
| Remote Controls | | | | |
| Wireless Remote Foot Pedal | 301580 | Wireless foot pedal (range: 27 m) | | |
| Wireless Remote Hand Control | 301582 | Wireless hand control (range: 90 m) | | |
| RFCS-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 058040020 058040021 | Single-hand remote control for current only, 5 m Single-hand remote control for current only, 10 m 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  consumables

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