

# Maxstar® 161 Series

TIG/Stick Welding  
Power Source



## Quick Specs

### Light Industrial Applications

Process pipe  
Dairy industry  
Food/beverage industry  
Restaurant/kitchen repair  
Experimental aircraft  
Shipboard installation/repair  
Maintenance repair

### Processes

Stick (SMAW)  
Lift-Arc™ TIG (GTAW)  
High-frequency TIG (GTAW)\*  
Pulsed TIG (GTAW-P)\*

\*STH model only.

**Input Power** 120–240 V, 1-phase power

**Amperage Range** 120 V: 5–130 A (DC TIG)  
20–90 A (DC stick)  
240 V: 5–160 A (DC TIG)  
20–160 A (DC stick)

**Max. Open-Circuit Voltage** 48

**Net Weight** 13 lb. (5.9 kg)



Allows for any input voltage hookup (120–240 V) with no manual linking, providing convenience in any job setting. Ideal solution for dirty or unreliable power.

**Portable** in the shop or at the job site — at 13 pounds, the handle/shoulder strap allows the end user to easily move from location to location.

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

**Thermal overload protection** helps prevent machine damage if the duty cycle is exceeded or airflow is blocked.

**Digital meter** for more precise control when presetting or monitoring welding amperage.

**Simple-to-use operator interface** providing only the necessary controls in a compact machine.

**Lift-Arc™** provides TIG arc initiation without the use of high frequency.

**Built-in gas solenoid** eliminates the need for a bulky torch with a gas valve.



Maxstar 161 STL

Maxstar 161 STH

### Additional STH model 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.

**High-frequency** for non-contact arc initiation that reduces tungsten and material contamination.

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

**Full function remote control** for precise amperage control for critical welds on thin materials (6-pin fingertip or foot control available.)

**Selectable trigger configuration** allows the operator to choose standard or 2T trigger method to meet the application.

**Low OCV stick** is a simple design that reduces the open-circuit voltage to 12–16 volts when the welding power source is not in use. This circuit design is now built into the Maxstar 161 eliminating the need for add-on voltage reducers.

**Hot Start™** adaptive control provides positive arc starts without sticking.

**Power factor corrected (PFC)** for optimum performance especially on 120 volts — reduces nuisance breaker tripping.

**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.

**Superior stick arc performance** even on the difficult-to-run electrodes like E6010.



Power source is warranted for three years, parts and labor.  
Original main power rectified parts are warranted for five years.



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# Specifications (Subject to change without notice.)

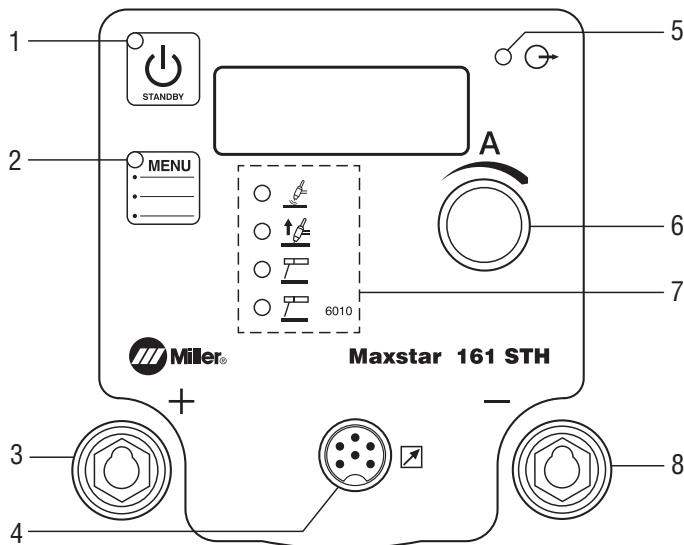


| Welding Mode | Input Power | Welding Amperage Range | Rated Welding Output               | Amps Input at Rated Output, 50/60 Hz | KVA at Duty Cycle | KW   | Max. Open-Circuit Voltage | Dimensions  | Net Weight      |
|--------------|-------------|------------------------|------------------------------------|--------------------------------------|-------------------|------|---------------------------|---|-----------------|
| TIG          | 120 V, 15 A | 5–130 A                | 90 A at 13.6 VDC, 100% duty cycle  | 14.61                                | 1.75              | 1.70 | 48 VDC (12–16 VDC*)       | H: 10.3 in. (262 mm)<br>W: 5.6 in. (142 mm)<br>D: 13.5 in. (343 mm) | 13 lb. (5.9 kg) |
|              |             |                        | 130 A at 15.2 VDC, 30% duty cycle  | 22.6                                 | 2.73              | 2.70 |                           |   |                 |
|              | 240 V       | 5–160 A                | 110 A at 14.4 VDC, 100% duty cycle | 9.35                                 | 2.24              | 2.12 |                           |   |                 |
|              |             |                        | 160 A at 16.4 VDC, 20% duty cycle  | 15.05                                | 3.62              | 3.49 |                           |   |                 |
| Stick        | 120 V, 15 A | 20–90 A                | 60 A at 22.4 VDC, 100% duty cycle  | 14.68                                | 1.75              | 1.71 |                           |   |                 |
|              |             |                        | 90 A at 23.6 VDC, 30% duty cycle   | 23.16                                | 2.78              | 2.76 |                           |   |                 |
|              | 240 V       | 20–160 A               | 110 A at 24.4 VDC, 100% duty cycle | 14.31                                | 3.43              | 3.30 |                           |   |                 |
|              |             |                        | 160 A at 26.4 VDC, 20% duty cycle  | 22.55                                | 5.41              | 5.25 |                           |   |                 |

\*Sense voltage for stick and Lift-Arc™ TIG.

Certified by Canadian Standards Association to both the Canadian and U.S. Standards.

## Control Panel

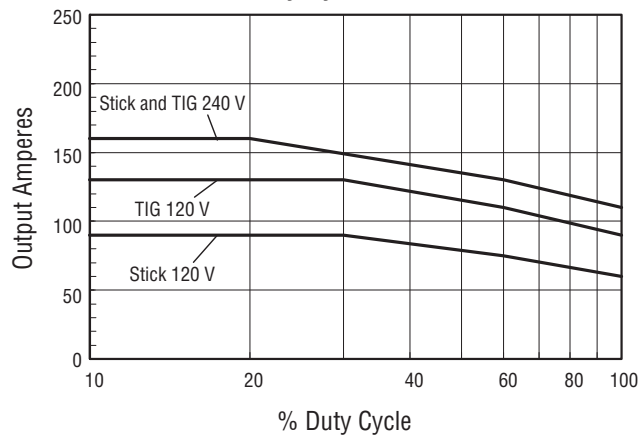


1. Power Switch
2. Menu Button
3. Positive Weld Output Receptacle
4. Remote Receptacle
5. Ready Light
6. Amperage Adjustment Control
7. Process Indicator Lights
  - High-frequency TIG\*
  - Lift-Arc™ TIG
  - Stick
  - Stick 6010
8. Negative Weld Output Receptacle

\*STH model only.

## Performance Data

Duty Cycle Chart



## Maxstar® 161 Packages



907711  
package shown.

**STL Standard Package 907710**  
**STH Standard Package 907711**

Packages include:

- Maxstar 161 power source
- 6.5 ft. (2 m) 120-volt and 240-volt power cords
- Stick electrode holder with 13 ft. (4 m) cable and 25 mm Dinse-style connector
- Work clamp with 10 ft. (3 m) cable and 25 mm Dinse-style connector
- One air-cooled TIG torch connector (195234)
- Handle/shoulder strap
- Quick-reference guide



90771001  
package shown.

**STL TIG/Stick Package 907710001**  
**STL TIG/Stick Package with Remote Fingertip Control 907710002**  
**STH TIG/Stick Package with Remote Fingertip Control 907711001**

Packages include:

- Maxstar 161 power source
- 6.5 ft. (2 m) 120-volt and 240-volt power cords
- X-CASE™ — provides protection in transport and storage
- RCCS-6M remote fingertip control (195184)
- Weldcraft™ A-150 (WP-17) 12.5 ft. (3.8 m) TIG torch with connector
- Stick electrode holder with 13 ft. (4 m) cable and 25 mm Dinse-style connector
- Work clamp with 10 ft. (3 m) cable and 25 mm Dinse-style connector
- Flow gauge regulator with gas hose
- AK2C accessory kit with short back cap, nozzles, collets, collet bodies, and 2% ceriated tungsten electrodes (.040, 1/16, and 3/32 in.)
- Handle/shoulder strap
- Quick-reference guide

## Maxstar® 161 Comparison Chart

| Process Capabilities               | Model | S | STL | STH |
|------------------------------------|-------|---|-----|-----|
| Stick                              |       | ■ | ■   | ■   |
| Stick: 6010 Stick Mode             |       | ■ | ■   | ■   |
| TIG: Lift-Arc™ Starts              |       |   | ■   | ■   |
| TIG: High-Frequency Starts         |       |   |     | ■   |
| <b>Features</b>                    |       |   |     |     |
| Portable: 13 lb.                   |       | ■ | ■   | ■   |
| Digital Meter                      |       | ■ | ■   | ■   |
| Auto-Line™                         |       | ■ | ■   | ■   |
| Stick-Stuck                        |       | ■ | ■   | ■   |
| Hot Start™                         |       | ■ | ■   | ■   |
| Dual-Purpose Carrying Strap/Handle |       | ■ | ■   | ■   |
| Integrated Gas Valve               |       |   | ■   | ■   |
| Pulse (0–150 PPS) with Pro-Set™    |       |   |     | ■   |

## Genuine Miller® Accessories



### X-CASE™ 301429

Sturdy case provides ultimate protection for transport and storage. Also features convenient top carrying handle and side recessed hand grips. Store the Maxstar 161, accessories and gear in this generous case to be ready to go at any time. Dimensions (H x W x D): 13 x 10.5 x 30.625 in. (330 x 267 x 778 mm).



Female Receptacle

### Full KVA Adapter Cord 300517

NEMA 14-50P to NEMA 6-50R. Adapts engine drive 120/240 V plug to Maxstar 240 V plug.

## Remote Controls and Switches



### RCCS-6M (6-pin plug)

**195184** 13.25 ft. (4 m) cord

**195503** 26.5 ft. (8 m) cord

North/south rotary-motion fingertip current/contacter control attaches to TIG torch using two hook-and-loop fasteners. Great for applications that require a finer amperage control. Includes cord and plug.



### RFCS-6M (6-pin plug)

**195183**

13.25 ft. (4 m) cord

**195504**

20 ft. (6 m) cord

Foot pedal current/contacter control. Includes cord and plug.



### RMS-6M (6-pin plug)

**195269**

Momentary-contact switch for contactor control. Rubber-covered pushbutton dome switch ideal for repetitive on-off applications. Includes 26.5 ft. (8 m) cord and plug.

## TIG Torches

### Weldcraft™ Air-Cooled Torches

**WP-17-12-R** A-150 (WP-17)

12.5 ft. (3.8 m) TIG torch with gas thru connector.

**WP-17-25-R** A-150 (WP-17)

25 ft. (7.6 m) TIG torch with gas thru connector.



### Air-Cooled TIG Torch Connector 195234

25 mm (small) Dinse-style gas thru for one-piece air-cooled torch.

## Ordering Information

| Power Source and Options   | Stock No. | Description   | Qty. | Price |
|--|-----------|---|------|-------|
| Maxstar® 161 STL Standard Package                                | 907710    | Maxstar 161 STL with electrode holder, work clamp, and 120-volt and 240-volt power cords  |      |       |
| Maxstar® 161 STL TIG/Stick Package                               | 907710001 | Includes 907710 <i>plus</i> X-CASE™, A-150 TIG torch, gas regulator with hose, and AK2C accessory kit                           |      |       |
|  | 907710002 | Includes 907710001 <i>plus</i> remote fingertip control   |      |       |
| Maxstar® 161 STH Standard Package                                | 907711    | Maxstar 161 STH with electrode holder, work clamp, and 120-volt and 240-volt power cords  |      |       |
| Maxstar® 161 STH TIG/Stick Package with Remote Fingertip Control | 907711001 | Includes 907711 <i>plus</i> X-CASE™, A-150 TIG torch, gas regulator with hose, AK2C accessory kit, and remote fingertip control |      |       |
| <b>Accessories</b>   |           |   |      |       |
| X-CASE™ (only)   | 301429    | Carrying case for Maxstar 161   |      |       |
| Full KVA Adapter Cord  | 300517    | Adapts engine drive 120/240 V plug to Maxstar 240 V plug  |      |       |
| RCCS-6M  | 195184    | 13.25 ft. (4 m) remote fingertip control  |      |       |
|  | 195503    | 26.5 ft. (8 m), remote fingertip control  |      |       |
| RMS-6M   | 195269    | 26.5 ft. (8 m) remote on/off control  |      |       |
| RFCS-6M  | 195183    | 13.25 ft. (4 m) remote foot control   |      |       |
|  | 195504    | 20 ft. (6 m) remote foot control  |      |       |
| Weldcraft™ A-150 (WP-17) TIG Torch                               |           | See above   |      |       |
| Air-Cooled TIG Torch Connector                                   | 195234    | Connects the A-125, A-150 and A-80 Weldcraft torches to 25 mm gas thru Dinse-style connector                                    |      |       |

Date:

Total Quoted Price:

Distributed by:



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