# Maxstar<sup>®</sup> 161 Series

#### Issued Feb. 2023 • Index No. DC/27.5

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<sup>™</sup> 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 jobsite — at 13 pounds the handle/shoulder strap allows the end user to easily move from location to location.

**Fan-On-Demand**<sup>™</sup> 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<sup>™</sup> 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

**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.



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

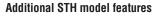


#### **Miller Electric Mfg. LLC**

An ITW Welding Company 1635 West Spencer Street P.O. Box 1079 Appleton, WI 54912-1079 USA

### **Equipment Sales US and Canada**

Phone: 866-931-9730 FAX: 800-637-2315 International Phone: 920-735-4554 International FAX: 920-735-4125



**Pro-Set**<sup>™</sup> 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.

Hot Start<sup>™</sup> 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.





# Specifications (Subject to change without notice.)

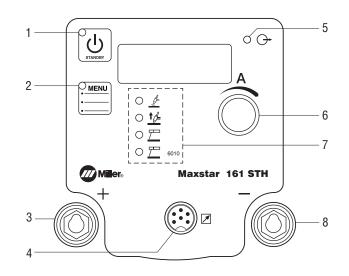


Welding Mode	Input Power	Welding Amperage Range	Rated Welding Output	Amps Input at Rated Output, 50/60 Hz	KVA at Duty Cycle	KW	Max. Open- Circuit Voltage	Dimensions	Net Weight
TIG	120 V, 15 A	5–130 A	90 A at 13.6 VDC, 100% duty cycle	14.61	1.75	1.70	48 VDC (12-16 VDC*)	H: 10.3 in. (262 mm) W: 5.6 in. (142 mm) 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	Stick 120 V, 15 A 240 V	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			
		0 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.

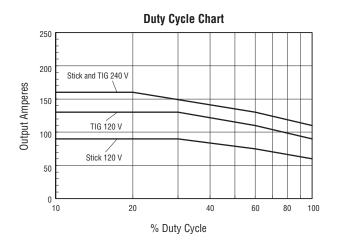
# **Control Panel**



- 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**





## Maxstar<sup>®</sup> 161 Packages



## 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



### STL TIG/Stick Package 907710001

STL TIG/Stick Package with Remote Fingertip Control907710002STH TIG/Stick Package with Remote Fingertip Control907711001Packages include:907711001

- Maxstar 161 power source
- 6.5 ft. (2 m) 120-volt and 240-volt power cords
- X-CASE<sup>™</sup> provides protection in transport and storage
- RCCS-6M remote fingertip control (195184)
- Weldcraft<sup>™</sup> 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 torch 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 <sup>™</sup> Starts				
TIG: High-Frequency Starts				
Features				
Portable: 13 lb.				
Digital Meter				
Auto-Line <sup>™</sup>				
Stick-Stuck				
Hot Start™				
Dual-Purpose Carrying Strap/Handle				
Integrated Gas Valve				
Pulse (0–150 PPS) with Pro-Set <sup>™</sup>				



## **Genuine Miller® Accessories**



#### X-CASE<sup>™</sup> 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).



۵ Female Receptacle

пΠ

Full KVA Adapter Cord 300517 NEMA 14-50P to NEMA 6-50R. Adapts engine drive 120/240 V plug to Maxstar 240 V plug.

**Ordering Information** 

## **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/ contactor 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) 301587 13.25 ft. (4 m) cord 301588 20 ft. (6 m) cord Foot pedal current/contactor control. Includes cord and plug.



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<sup>™</sup> Air-Cooled Torches

WP-17-12-R A-150 (WP-17) 12.5 ft. (3.8 m) TIG torch. Requires gas thru connector 195234 below. WP-17-25-R A-150 (WP-17) 25 ft. (7.6 m) TIG torch. Requires gas thru connector 195234 below.



Air-Cooled TIG Torch Connector 195234 25 mm (small) Dinse-style gas thru for one-piece air-cooled torch.

## **Educational Materials**

To order, please call Miller Literature at 866-931-9732 or visit MillerWelds.com/resources/tools.

Gas Tungsten Arc Welding (TIG) Publication 250833

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 <sup>™</sup> , A-150 TIG torch, gas regulator with hose, and AK2C torch accessory kit		
	907710002	Includes 907710001 plus 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 <sup>™</sup> , A-150 TIG torch, gas regulator with hose, AK2C torch accessory kit, and remote fingertip control		
Accessories				
X-CASE <sup>™</sup> (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 195503	13.25 ft. (4 m) remote fingertip control 26.5 ft. (8 m), remote fingertip control		
RFCS-6M	301587 301588	13.25 ft. (4 m) remote foot control 20 ft. (6 m) remote foot control		
RMS-6M	195269	26.5 ft. (8 m) remote on/off control		
Weldcraft <sup>™</sup> 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		
Educational Materials		See above		
Date:		Total Quoted Price:		

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