

# 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)

## AUTO-LINE™ TECHNOLOGY

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™** 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.

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



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.

**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.

**Adaptive Hot Start™** 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.)

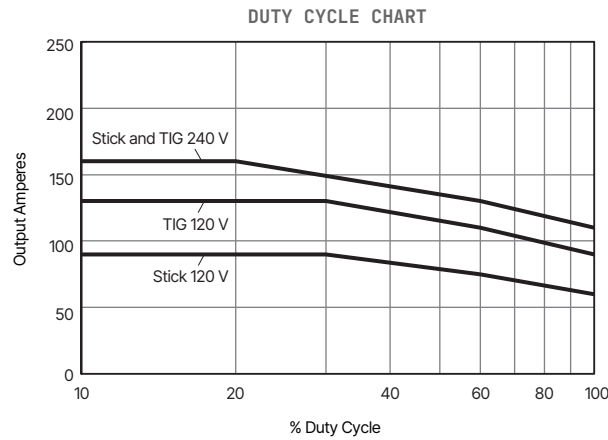


WELDING MODE	INPUT POWER	WELDING AMPERAGE RANGE	RATED OUTPUT	AMPS INPUT AT RATED OUTPUT, 50/60 HZ	KVA AT DUTY CYCLE	KW	MAX. OPEN-CIRCUIT VOLTAGE	DIMENSIONS	NET WEIGHT
TIG (GTAW)	120 V, 15 A	5–130 A	90 A at 13.6 VDC, 100% duty cycle	14.61	1.75	1.70	48 VDC (12–16 VDC*)	H: 10.3 in. (262 mm) W: 5.6 in. (142 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 (SMAW)	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			

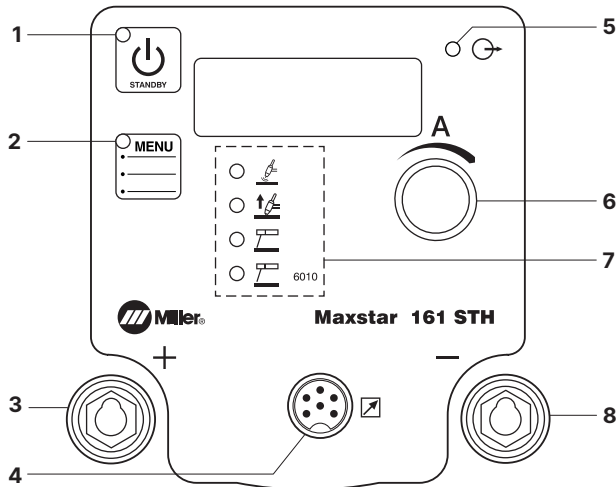
\*Sense voltage for low OCV stick and Lift-Arc™ TIG.

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

## Performance Data



## 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.

# Maxstar® 161 Comparison Chart

PROCESS CAPABILITIES	MAXSTAR 161 S	MAXSTAR 161 STL	MAXSTAR 161 STH
Stick	■	■	■
Stick: 6010 stick mode	■	■	■
TIG: Lift-Arc™ starts		■	■
TIG: High-frequency starts			■
FEATURE			
Portable: 13 lb.	■	■	■
Digital meter	■	■	■
Auto-Line™	■	■	■
Stick-Stuck	■	■	■
Hot Start™	■	■	■
Dual-purpose handle/shoulder strap	■	■	■
Integrated gas valve		■	■
Pulsed (0–150 pps) with Pro-Set™			■

## Maxstar® 161 Packages

### Standard Packages

**907710** STL Standard Package

**907711** STH Standard Package

Includes

- Maxstar 161 STL **OR** STH 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



**907711**  
package  
shown.

### TIG/Stick Packages

**907710001** STL TIG/Stick Package

**907710002** STL TIG/Stick Package with Remote Fingertip Control

**907711001** STH TIG/Stick Package with Remote Fingertip Control

Includes

- Standard package above
- Weldcraft™ A-150 (WP-17) 12.5 ft. (3.8 m) TIG torch
- X-CASE™ — provides protection in transport and storage
- 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.)
- RCCS-6M remote fingertip control (packages 907710002 and 907711001 only)



**907711001**  
package  
shown.

# 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/contact 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/contact 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™ A-150 (WP-17)

#### Air-Cooled TIG Torches

**WP-17-12-R** 12.5 ft. (3.8 m)

**WP-17-25-R** 25 ft. (7.6 m)

Torches require 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](http://MillerWelds.com/resources/tools).

### Gas Tungsten Arc Welding (TIG) Publication 250833

## Ordering Information

POWER SOURCE AND OPTIONS	STOCK NO.	DESCRIPTION	QTY.	PRICE
Maxstar® 161 STL Standard Package	907710	See page 3 for contents		
Maxstar® 161 STL TIG/Stick Package	907710001	See page 3 for contents		
Maxstar® 161 STL TIG/Stick Package with Remote Fingertip Control	907710002	See page 3 for contents		
Maxstar® 161 STH Standard Package	907711	See page 3 for contents		
Maxstar® 161 STH TIG/Stick Package with Remote Fingertip Control	907711001	See page 3 for contents		
<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		
RFCS-6M	301587	13.25 ft. (4 m) remote foot control		
	301588	20 ft. (6 m) remote foot control		
RMS-6M	195269	26.5 ft. (8 m) remote on/off 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		
<b>Educational Materials</b>				
		See above		

DATE:

TOTAL QUOTED PRICE:

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