

Maxstar® 161 STH

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

TIG (GTAW)
Pulsed TIG (GTAW-P)
Stick (SMAW)

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.

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

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

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.

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

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

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.



TIG/Stick Package with Remote Fingertip Control (907711001) comes complete with:

- Maxstar 161 STH 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

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

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

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

Single amperage range allows operator to accurately set amperage on both 120- or 240-volt primary power.

Inverter-based, DC power source has a **simple-to-use operator interface** providing only the necessary controls in a compact machine.

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

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 STH eliminating the need for add-on voltage reducers.

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.)

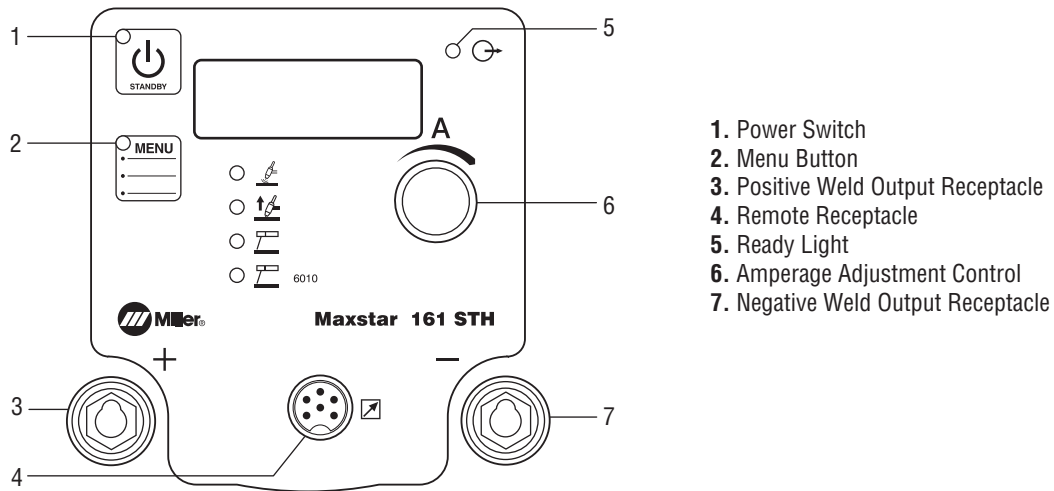


Welding Mode	Input Power	Welding Amperage Range	Rated Welding Output	Amps Input at Rated Output, 50/60 Hz	KVA at Duty Cycle	KW	Max. Open-Circuit Voltage	Dimensions	Net Weight
TIG	120 V, 15 A	5–130 A	90 A at 13.6 VDC, 100% duty cycle	14.61	1.75	1.70	48 VDC (12–16 VDC*)	H: 10.3 in. (262 mm) W: 5.6 in.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

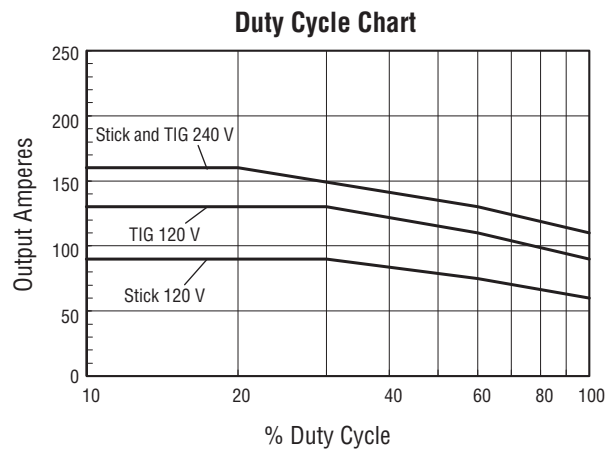
*Sense voltage for stick and Lift-Arc™ TIG.

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

Control Panel



Performance Data



Maxstar® 161 STH Packages



Standard Package 907711

Package includes:

- Maxstar 161 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



TIG/Stick Package with Remote Fingertip Control 907711001

Packages include:

- Maxstar 161 STH 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

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)

195183

13.25 ft. (4 m) cord

195504

20 ft. (6 m) cord

Foot pedal current/

contactor 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 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		
Accessories				
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 195503	13.25 ft. (4 m) remote fingertip control 26.5 ft. (8 m), remote fingertip control		
RMS-6M	195269	26.5 ft. (8 m) remote on/off control		
RFCS-6M	195183 195504	13.25 ft. (4 m) remote foot control 20 ft. (6 m) remote foot control		
Weldcraft™ A-150 (WP-17) TIG Torch		See page 3		
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:

