

# HOBART<sup>®</sup>

MADE IN THE  
**USA**

**5/3/1**  
INDUSTRIAL  
WARRANTY

# TREK<sup>™</sup> 180

## Battery-Powered MIG Welding Package



245164  
Nov. 2010



**#500539**

**Includes:**

- Pouch for storage of MIG gun and work lead during transportation
- Comfortable 10 ft. H100L4-10 MIG torch
- 10 ft. work lead with clamp
- 2 premium high-performance sealed lead-acid batteries
- Spare .030 in. (0.8 mm) contact tips
- Sample spool of .030 in. (0.8 mm) self-shielded flux cored welding wire
- Weld set-up and information chart
- Removable power/recharging cord with plug
- Owner's Manual with parts lists, installation, operation, maintenance and MIG welding guidelines

The TREK 180 battery-powered, inverter-based wire welder is the first professional system on the market for MIG welding “off the power grid.” No matter where your hobby or job takes you, the TREK delivers heavy-duty weld power to fabricate or repair 24 ga. up to 1/4 in. mild steel in a single pass. Powered by two internal, premium high-performance, sealed lead-acid batteries, the high-purity energy storage technology enables the TREK to be charged complete in about 90 minutes and quickly recharged in about 20 minutes. The unit delivers approx. 100 inches of weld bead when fully charged (using .030 diameter flux-cored wire on 1/8 in. mild steel.)

The integrated charging system is powered by a standard 115 volt household receptacle. The machine can operate while plugged in or completely cordless. The TREK delivers 180 amps (approx. 12% duty cycle) on 115 volt standard power... a weld output which, until TREK, has been limited to 230 volt welders.

The TREK 180 can be charged inside a vehicle using an automotive power inverter (400 continuous watt minimum/charging times increase slightly.) The weld output is regulated to provide consistent welding voltage regardless of battery level. The unit is setup for both self-shielded flux-cored and solid gas-shielded wires from .024 to the .035 diameter. A removable storage bag provides cable management of standard MIG gun, work cable, clamp and removable power cord. Impact-resistant case provides strength and durability, protecting the internal components and welding wire.

Features	Benefits
<b>Excellent arc performance</b>	Inverter arc control technology for a smooth and stable arc.
<b>Proven built-in wire feeder with quick-release tension lever</b>	Provides positive feed with adjustable tension. Easy access for threading wire.
<b>Low battery shutdown</b>	Disables the welder when the battery runs low to protect the life of the battery.
<b>“AutoPower”™ technology</b>	Scans the available input charging power to compensate line draw for low capacity devices such as small automotive inverters.
<b>Infinite voltage and wire control</b>	Provides a broader operating window for each wire with quick and easy adjustment for different materials and thicknesses.
<b>Convenient polarity changeover</b>	Quick and easy polarity change access for solid or tubular wire.
<b>Quick-change, dual-groove drive roll</b>	Easy to change from one wire size to another .023/.025 in. (0.6 mm) or .030-.035 in. (0.8-0.9 mm).
<b>LED indicators</b>	Diagnostic lights for quick information on the temperature, charging and battery status.
<b>High-performance sealed lead batteries</b>	Thin plate pure lead (TPPL) technology allows for fast recharge (only 20 minutes).
<b>Short circuit protection</b>	Protects unit against current overload.
<b>Self-resetting thermal overload protection</b>	Protects power circuitry against thermal overload to ensure reliability.
<b>Self-resetting motor protection</b>	Protects wire feed system from overload, no fuses to change or circuit breaker buttons to press.
<b>Hobart's 5/3/1 Industrial Warranty</b>	Five-year warranty on transformers, stabilizers and generators; three years on electronics (drive motors, rectifiers); and one year on guns (MIG and plasma torches).

# Specifications (SUBJECT TO CHANGE WITHOUT NOTICE.)



Rated Output	Current Range	Max. Open Circuit Voltage	Wire Feed Speed Range	Amps Input at Rated Load, 60 Hz 115 V KVA KW	Dimensions	Net Weight	Shipping Weight
120 A, 17 VDC at 20% Duty Cycle	25–180 A	30 V	40–400 IPM	12* 1.38 0.75	H: 13-5/16 in. (338 mm) W: 17 in. (433 mm) D: 7-7/8 in. (200 mm)	51.87 lb. (23.5 kg)	61 lb. (27.7 kg)

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

\*Auto Power™ technology will adjust as low as 3.5 A based on input power available.

## TREK 180 Welding Guide

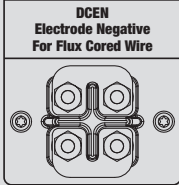
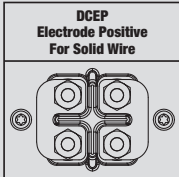
### Selecting Wire, Gas and Control Settings

Settings are approximate. Adjust as required. Thicker materials can be welded using proper technique, joint preparation and multiple passes.

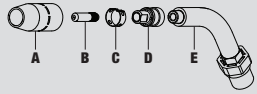
Recommended Voltage and Wire Speed Settings for Thickness of Metal Being Welded  
Number on Left is Voltage Setting / Number on Right is Wire Feed Setting

Material Being Welded	Wire Type, and Polarity Setting	Suggested Shielding Gases 20–30 cfh Flow Rate	Diameter of Wire Being Used	Recommended Voltage and Wire Speed Settings for Thickness of Metal Being Welded										
				24 gauge .024 inch (0.6 mm)	22 gauge .030 inch (0.8 mm)	20 gauge .036 inch (0.9 mm)	18 gauge .048 inch (1.2 mm)	16 gauge .060 inch (1.5 mm)	14 gauge .075 inch (1.9 mm)	12 gauge .105 inch (2.7 mm)	1/8 inch (3.2 mm)	3/16 inch (4.8 mm)	1/4 inch (6.4 mm)	5/16 inch (7.9 mm)
Steel	Flux Core E71T-GS (DCEN)	No Shielding Gas Required Good for Windy or Outdoor Applications	.030" (0.8 mm)	—	—	—	1 / 0	2 / 5	3 / 10	5 / 30	6 / 40	8 / 70	10 / 100	—
			.035" (0.9 mm)	—	—	—	—	—	—	—	5 / 20	8 / 40	10 / 50	10 / 60
	Solid Wire ER70S-6 (DCEP)	C <sub>25</sub> Gas Mixture 75% Ar / 25% CO <sub>2</sub> Produces Less Spatter Better Appearance	.024" (0.6 mm)	0 / 20	0 / 30	2 / 40	4 / 40	7 / 60	8 / 80	10 / 100	10 / 100	—	—	—
			.030" (0.8 mm)	—	0 / 10	1 / 10	2 / 20	3 / 30	3 / 40	5 / 50	7 / 50	10 / 60	10 / 60	—
			.035" (0.9 mm)	—	—	—	—	3 / 10	5 / 20	6 / 25	7 / 30	9 / 35	10 / 40	—

### Changing Polarity



### Welding Gun Consumables



A) Nozzles	Stock No.
.500" orf flush	169715
Flux Cored	226190
B) Tips	
.023" (0.6mm)	087299
.030" (0.8mm)	000067
.035" (0.9mm)	000068
C) Retaining Ring	170470
D) Contact Tip Adaptor	169716
E) Head Tube	242831
Liners	
.023" / .025"	194010
.030" / .035"	194011

- Set Tension Knob Setting to 3 at start. Adjust tension per instructions in the manual.
- Wire Speed listed is a starting value only. Wire speed setting can be fine-tuned while welding. Wire speed also depends on other variables such as stick out, travel speed, weld angle, cleanliness of metal, etc.

### Drive Rolls

See Owner's Manual  
Match drive roll groove to diameter of wire being used.

Dual Grooved Groove	Wire Size	Stock No.
V – Groove	.024" - .030" / .035" (0.6mm - 0.8mm / 0.9mm)	237338
VK – Groove	.030" / .035" - .045" (0.8mm / 0.9mm - 1.2mm)	202926

Battery Must Be Recharged After Each Use.

For Maximum Battery Life, Unit Should Be Plugged In When Not In Use

USE ONLY FACTORY AUTHORIZED BATTERIES  
Stock No. 232612

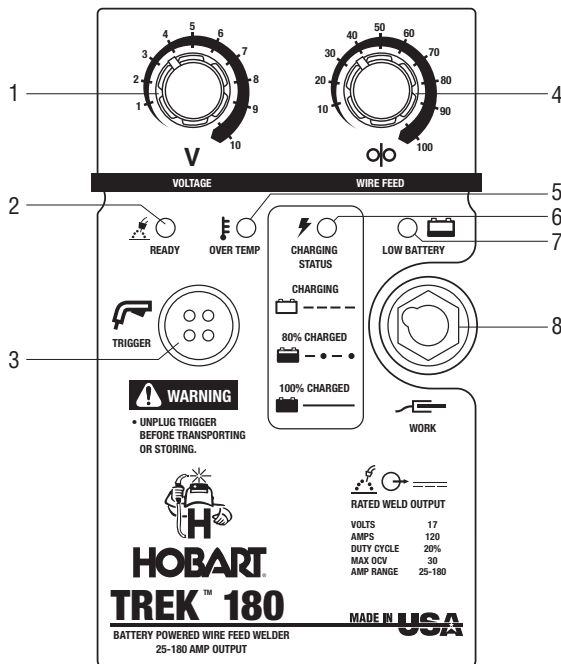
### LED Status



- Unit is charged, ready to weld
- Over Temp has occurred, stop welding and allow unit to cool down
- Batteries Charging
- Batteries 80% Charged
- Batteries Fully Charged
- Low Battery, plug in welder to charge

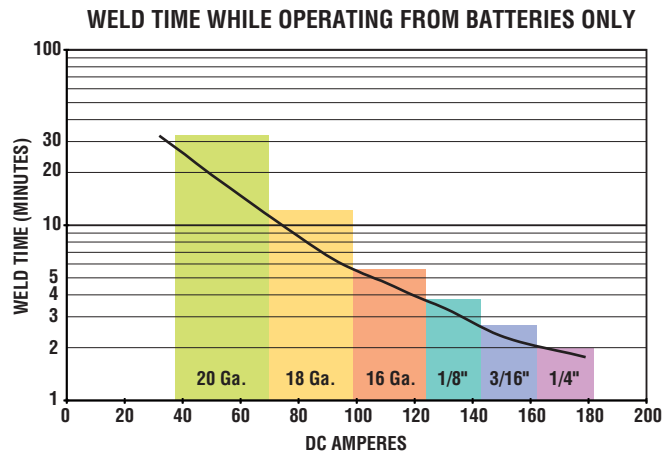
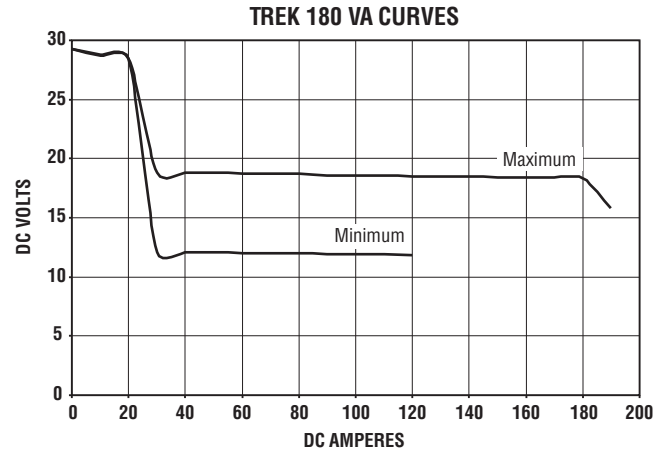
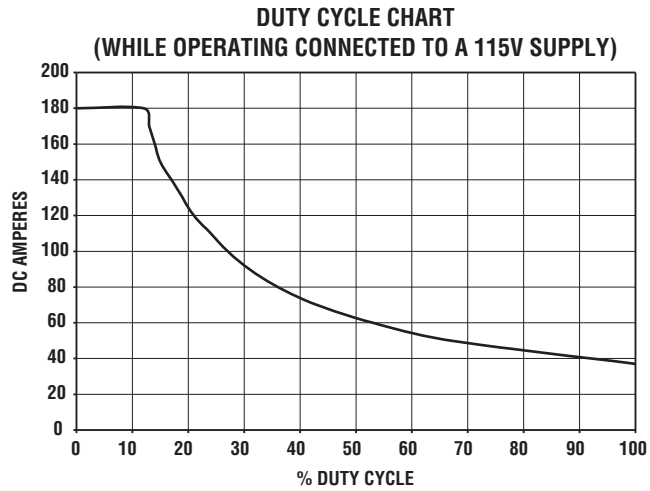
See Owner's Manual for Other LED Combinations 232680-A

## Control Panel



1. Voltage Control
2. Welder Ready Light
3. Trigger Receptacle
4. Wire Speed Control
5. Over Temperature Light
6. Charging Status Light
7. Battery Status Light
8. Work Lead Receptacle

## Performance Data



## Accessories

### H100L4-10 Replacement MIG Torch #243864

For .030-.035 in. (0.8-0.9 mm) wire.  
Includes 10 ft. (3 m) cable.



### Drive Rolls

#### Dual-Groove, V-Smooth #237338

For .023/.025 in. (0.6 mm) and .030-.035 in. (0.8-0.9 mm) wire.

#### Dual-Groove, V-Knurlled #202926

For .030-.035 in. (0.8-0.9 mm) and .045 in. (1.2 mm) flux-cored wire.



### Contact Tips

(See chart on back page.)



### MIG Nozzle

(See chart on back page.)  
Protects tip adapter and focuses gas coverage.



### Gasless Flux-cored Nozzle

(See chart on back page.)  
For use with self-shielding flux-cored wires. Improves visibility, eases access in

tight corners, protects tip adapter/gas diffuser from spatter and from shorting to the work piece. For use with H9, H10, M10, and M15 torches.



### Tip Adapter

(See chart on back page.)



### Replacement Liners

(See chart on back page.)

## Consumables

Item	Hobart Package Part #*	Miller Package Part #**
<b>Contact Tips</b>		
.023/.025 in. (0.6 mm)	#770174 (5 per package)	#087 299 (10 per package)
.030 in. (0.8 mm)	#770177 (5 per package)	#000 067 (10 per package)
.035 in. (0.9 mm)	#770180 (5 per package)	#000 068 (10 per package)
<b>MIG Nozzle (Standard)</b>	#770404	#169 715
<b>Gasless Flux Cored Nozzle</b>	#770487	#226 190
<b>Tip Adapter</b>	#770402	#169 716
<b>Replacement Liners</b>		
.023/.025 in. (0.6 mm)	#196139	#194 010
.030/.035 in. (0.8/0.9 mm)	#196139	#194 011
.035/.045 in. (0.9/1.2 mm)	#196140	#194 012

\*Available at farm and tool supply retailers. \*\*Available at Hobart/Miller welding distributors.



**Hobart Welders** An Illinois Tool Works Company

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