

# Bobcat™ 250 NT Series

Issued November 2003 • Index No. ED/4.4

Gas, LP or Diesel Engine-  
Driven Welder/Generator



## Quick Specs

### Industrial Applications

Structural Steel Work  
General Maintenance  
Farm/Ranch Applications  
Use as a Stand-Alone Generator

### Processes

Stick (SMAW)  
Flux Cored (FCAW)  
MIG (GMAW)  
DC TIG (GTAW)  
Non-Critical AC TIG (GTAW)  
Air Carbon Arc (CAC-A) Cutting and Gouging (3/16 in carbons)  
Air Plasma Cutting and Gouging with optional Spectrum models

### Generator Power Output Rated at 104° F

10,000 Watts Peak, 9500 Watts Continuous

### Weld Output Rated at 104° F

For AC/DC Stick 250 Amps at 25 Volts, 100% Duty Cycle  
For FCAW/MIG (CV) 250 Amps at 28 Volts, 100% Duty Cycle  
275 Amps at 25 Volts, 60% Duty Cycle

### Output Range

For AC/DC Stick 40–250 Amps  
For FCAW/MIG (CV) 17–28 Volts

Weight Gas/LP: 535 lb (243 kg) Diesel: 690 lb (313 kg)

## The Power of Blue.®

### Bulletproof technology

eliminates use of complicated circuit boards.

Choose from the industry's **highest quality engines** — Onan by Robin or Kohler gas engines are overhead valve, quiet, fuel efficient, and durable. Kubota is a durable, liquid-cooled diesel.

**Robust case design!** Protects engine components from accidental impact and allows plenty of air flow to cool and prolong the life of the engine.

**Industry-leading 10,000-watt (peak) generator power output** cranks out enough watts to simultaneously weld, run power tools and lights.



Delivers 250 amps of AC or DC weld output for Stick or TIG  
Delivers 275 amps at 25 volts (60% duty cycle) for MIG



**Same easy service! Fastex™ tool-free oil drain system** combined with **hour meter** makes service a snap.

**Single, moisture-proof, engine control switch** provides **automatic idle** for greater fuel savings and reduced noise.

**Six-position range switch** provides four ranges for popular stick electrodes and two ranges (high and low) for MIG welding.

**Optional No. 27 Hand Running Gear** provides maneuverability.



Total Parts Coverage for welder/generator and engine are warranted for 3 years, parts and labor.

MADE IN **USA**  
APPLETON, WI



**Miller Electric Mfg. Co.**  
An Illinois Tool Works Company  
1635 West Spencer Street  
Appleton, WI 54914 USA

**International Headquarters**  
Phone: 920-735-4505  
USA FAX: 920-735-4134  
Canadian FAX: 920-735-4169  
International FAX: 920-735-4125

**Web Site**  
www.MillerWelds.com



# Specifications (Subject to change without notice.)



Welding Mode	Weld Output Rated at 100% Duty Cycle at 104° F*	Max. Open-Circuit Voltage	Amperage Ranges in CC Mode*	Voltage Range in CV Mode	Single-Phase Generator Power Output Rated at 104° F/40° C*	Dimensions	Weight**
CC-AC	250 A at 25 V	80	40-100	—	<b>Peak:</b> 10,000 watts <b>Continuous:</b> 9,500 watts, 120/240 VAC, 84/42 A, 60 Hz while not welding	H: 33 in (838 mm) W: 18-3/4 in (476 mm) D: 45-1/2 in (1156 mm) 48 in (1219 mm) for Diesel model	<b>Gas/LP:</b> 535 lb (243 kg)  <b>Diesel:</b> 690 lb (313 kg)
CC-DC	250 A at 25 V	80	60-140 80-200 100-250	— — —			
CV-DC	250 A at 28 V (17-28 V) (275 A at 25 V at 60% Duty Cycle)	41		17-28			

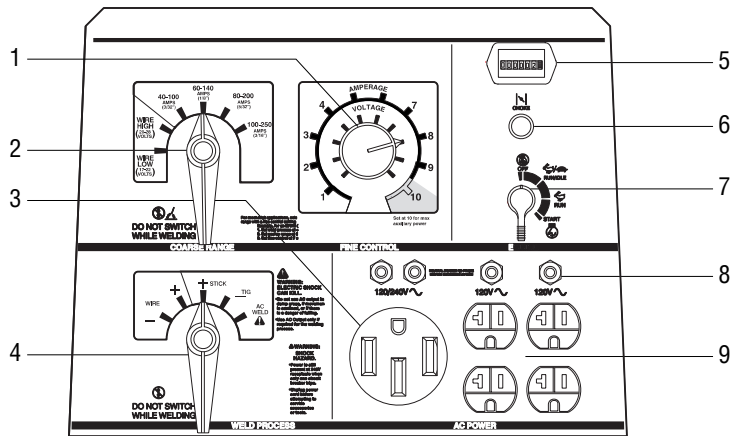
Certification by Canadian Standards Association available. See ordering information on back.

\*Rated at sea level. Rated values must be derated 5% when using LP gas (available with Kohler only). \*\*Net weight without fuel. Add 30 lb for shipping weight.

## Engine Specifications

Engine Brand/Warranty	Horsepower (HP)	Type	Weld Speed	Idle Speed	Fuel Capacity	Oil Capacity	Low Oil Pressure Shutdown
Kohler: 3-year mfg.	20 HP at 3600 RPM	Twin-cylinder, 4-cycle overhead valve, industrial air-cooled, gasoline or LP	3600 RPM	2250 RPM	10 gal (38 L)	1.75 qt (1.7 L), 2 qt (1.9 L) with filter	Standard
Onan by Robin: 3-year mfg.	20.5 HP at 3600 RPM	Twin-cylinder, 4-cycle overhead valve, industrial air-cooled, gasoline	3600 RPM	2250 RPM	10 gal (38 L)	1.6 qt (1.5 L), 1.8 qt (1.75 L) with filter	Standard
Kubota: 2-year limited North American mfg.	19 HP at 3600 RPM	3-cylinder, industrial liquid-cooled, diesel	3600 RPM	2450 RPM	10 gal (38 L)	3.4 qt (3.2 L)	Low oil pressure, high coolant temperature

## Control Panel



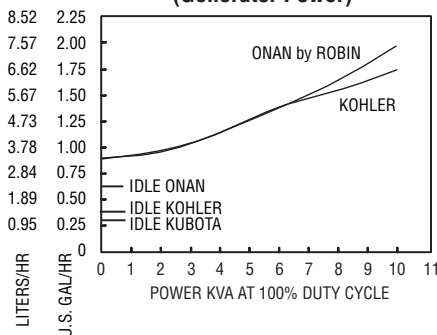
1. Fine Adjust Control
2. Coarse Range Switch
3. 120/240 VAC Full kVA Receptacle\*
4. Weld Process Selector Switch
5. Engine Hour Meter
6. Engine Choke Control
7. Engine Control Switch
8. Auxiliary Power Circuit Breakers
9. Factory-Installed, 20 A, 120 VAC Duplex Receptacles (Optional GFCI Circuit Breakers available)

\*For matching plug, order #119 172

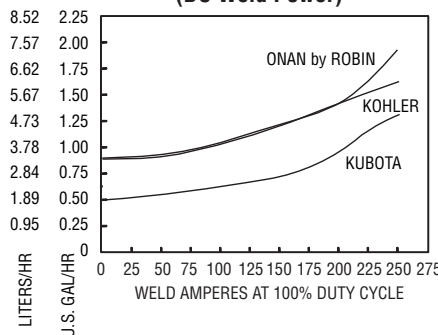
Typical set-up for E7018 (1/8 in) electrode

## Performance Data

### FUEL CONSUMPTION (Generator Power)



### FUEL CONSUMPTION (DC Weld Power)



### FUEL CONSUMPTION DATA

- 10-gallon fuel capacity.
- On a typical job using 1/8-in 7018 electrodes (125 amps, 20% duty cycle) you can expect over 16 hours (Gas) or 20 hours (Diesel) of operation.
- Welding at 150 amps at 40% duty cycle, uses approximately 3/4 gallon (Gas) or 1/2 gallon (Diesel) per hour—over 13 hours (Gas) or 18 hours (Diesel) of operation.
- Under a continuous load of 4000 watts of generator power, the Bobcat 250 NT would run for about 9 hours.

# The Bobcat Competitive Advantage

## Make deadlines, not excuses.

- 68% of service technicians, managers and owners, recommend the Bobcat over the competition.



Technician Recommendations

- 98% of current owners are “satisfied to very satisfied” with the Bobcat.\*

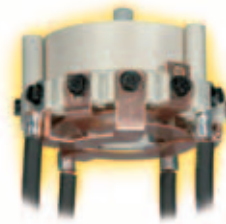
\*Based on an independent survey of thousands of Bobcat owners.



All ratings are tested at 104° F (40° C) to maintain tough work schedules, even in hot weather.



Patented **self-cooling stator barrel** design directs airflow for maximum cooling and allows the Bobcat to perform at 100% duty cycle even in 104° F (40° C) heat!



Leads are lugged to heavy-duty range switches for field-proven durability. Dust cover protects switches from dirt and grit.



**Strong generator power – even while welding.** Power to keep chop saws, lights, grinders, and other tools going when other machines can't.

### TYPICAL CONTRACTOR TOOLS POWER USAGE

Tool	Starting Watts	Running Watts
Chop Saw, 14 inch	6,300	1,800
9" Grinder	2,400	1,800
Air Compressor, 1-1/2 HP	8,200	2,200
<b>Flood Lights</b>		
Mercury	1000	—
Vapor	1,250	1,000
Submersible Pump, 400 gph	600	200
Centrifugal Pump, 900 gph	900	500
High Pressure Washer, 1 HP	6,100	1,600
Wet & Dry Vac, 1.7 HP	900	900

To select a generator that has enough power output in watts, add the watts for the items you want to simultaneously run. Tools and appliances with induction motors may require 3–7 times the listed wattage when starting. All data listed is approximate — check your tool/appliance for specific wattage requirements.

### SIMULTANEOUS WELDING AND POWER

Weld Current in Amperes	Total Power in Watts	120 V Full kVA Receptacle Amperes	240 V Full kVA Receptacle Amperes
0	10,000	84*	42*
90	8000	66*	33
125	5200	43*	21
180	3500	29*	14
250	2200	18	9

For example, if you're welding at 125 amps you also have 5200 watts available for powering lights or tools (either 43 amps from the 120 volt full kVA receptacle or 21 amps from the 240 volt full kVA receptacle).

\*50 A, 120/240 VAC receptacle. See Owner's Manual for additional information.



## Genuine Miller Factory Options \*Available as factory option. See ordering information on back page.

### GFCI Protection\*

Ground Fault Circuit Interrupters are required on some construction sites. Factory option contains two GFCI 120 VAC duplex receptacles. (240 VAC GFCI receptacle not required).

### GFCI Field Kit #195 192

Ground Fault Circuit Interrupters are required on some construction sites. This kit contains two GFCI 120 VAC duplex receptacles for field installation.

### Engine Tune-Up Kits

**#180 096** Field. Kohler CH20 OHV

**#199 062** Field. Onan by Robin P220 OHV

**#206 421** Field. Kubota D722

Tune-up kits include engine filters and spark plugs.

### Battery Charger\*

Built-in system for industrial battery charging. Charges 12, 24 and 36 V batteries while not welding or using generator power.

*Note: AC weld output not available with this option.*



### Full KVA Plug Kit

**#119 172**

**(Available through Service Parts.)**

120/240 VAC, 50 amp plug (NEMA 14-50P) to fit full KVA receptacle.

### LP Gas\*

Liquid withdrawal with vaporizer and regulator. Does not include tanks, brackets, or hose from tank to regulator.

*Note: Requires LP Tank Mounting Bracket #043 647.*

## Genuine Miller Accessories



Shown with optional LP Tank Mounting Bracket

### No. 27 Hand Running Gear

**#043 014**

Rugged, lightweight design provides maximum maneuverability. Comes with standard handle, two large 480/400 x 8 pneumatic tires, two 5 in rubber swivel casters, adjustable axle and easy-to-read instructions. Shown with optional LP tank mounting bracket #043 647.

### LP Tank Mounting Bracket (Horizontal)

**#043 647**

Includes brackets and clamps to mount the tank and hose with fittings to converter. For 33 or 43 lb tanks only. For use with No. 4B or No. 27 running gear.

*Note: Cannot be used with No. 27CR Cylinder Rack.*



Shown with optional Cylinder Rack.

### No. 4B Running Gear #041 930

Includes two rear 480/400 x 8 pneumatic tires, two 8 in (203 mm) solid-rubber-tired front wheels and a 32 in (813 mm) handle.

### No. 27CR Cylinder Rack #043 040

Designed for use with No. 4B or No. 27RG. Consists of base tray with bottle bracket, and vertical support rack with safety chain.

*Note: Cannot be used with LP Tank Mounting Bracket.*



### Protective Cover

**#195 136** Blue, with logo

Attractive, mildew-resistant, odor-free, waterproof cover protects your machine's finish and includes easy-off handles.

### Spark Arrestor #043 579

Mandatory when operating on California grasslands, brush, or forest-covered land, and all National Forests. For other areas, check your state and local laws.

## Plasma Cutting

Note: The following Spectrum machines can be operated utilizing generator power.



### Spectrum® Thunder #903 741

See Lit. Index No. PC/13.0

### Spectrum® 375 CutMate™\* #903 891

See Lit. Index No. PC/9.1

### Spectrum® 625 CutMate™\* #907 058

See Lit. Index No. PC/9.5

### Spectrum® 2050\* #950 201

See Lit. Index No. PC/7.0

\*Requires separate air source.

## MIG (GMAW) or Flux Cored (FCAW) Welding



### SuitCase 8VS™ Wire Feeder #194 890

### SuitCase™ 12VS Wire Feeder #194 941

Lightweight, portable, voltage-sensing wire feeder for .045/.052 flux core and .035/.045 hard wire. Includes secondary contactor and gas valve. Requires gun and drive roll kit. See Lit. Index No. M/6.4.



### No. 2 Stick Cable Set, 15 ft #195 196

Consists of 15 ft No. 2 electrode cable and holder, and 15 ft work cable and clamp. 200 A, 100% duty cycle.

### No. 2 Stick Cable Set, 50 ft #195 195

Consists of 50 ft No. 2 electrode cable and holder, and 50 ft work cable and clamp. 200 A, 100% duty cycle.



### 3045 FC Feeder #194 919

Light industrial, economical voltage-sensing feeder for .035 and .045 flux core wire applications. Includes 10 ft, 250 A M-25 gun. Gas solenoid kit available for .030 and .035 solid wire applications. See Lit. Index No. M/6.6.



### Spoolmatic® 15A #195 156

### Spoolmatic® 30A #130 831

Rated 200 amps at 100% duty cycle. Extend the weld process range by adding a portable 1 lb spool gun for aluminum and .035-.045 steel wire MIG. 15A model includes 15 ft (4.6 m) cable assembly. 30A model includes 30 ft (9.1 m) cable assembly. WC-115A with contactor required. See Lit. Index No. M/1.5.

### WC-115A Weld Control #137 546-01-1

Provides control circuitry to operate spool gun from Miller and competitive engine-driven products. Includes contactor.

*Note: Contactor Kit (#137 548) available for field installation in existing WC-115A Weld Controls having no contactor.*

### Spoolmate 3545 #195 015

Rated 150 amps at 60% duty cycle. Extend the weld process range by adding an economical, portable system for aluminum and small wire. Includes 20 ft (6.0 m) cable assembly. SGA 100G required for hook-up.

### SGA 100C #043 857

SGA with contactor required to connect Spoolmate 3035 and 3545 to CV engine drive. Includes 10 ft (3 m) 115 VAC power cable and plug, 6 ft (1.8 m) interconnecting cable, and 5 ft (1.5 m) gas hose.



Note: The following Millermatic machines can be operated utilizing generator power.

The Millermatic line of MIG welders are complete arc welding power source, wire feeder and gun packages designed for portability and ease of use.

### Millermatic® 135 #907 019

See Lit. Index No. DC/12.43

### Millermatic® 175 #907 020

See Lit. Index No. DC/12.44

### Millermatic® 210 #907 046

See Lit. Index No. DC/12.46

### Millermatic® Vintage #903 355

See Lit. Index No. DC/12.45

## TIG (GTAW) Welding



### HF-251D-1 High-Frequency Arc Starter and Stabilizer #042 388

*Requires Secondary Contactor and RMLS-14 Switch.*

A portable 115 volt,

250 amp unit. (No remote amperage control available on the Bobcat.)

### Secondary Contactor #041 969

Field Required to use HF-251D-1 with Bobcat 250 NT.



### RMLS-14 Switch #129 337

Required for HF-251D-1 starting and continuous HF use. Momentary- and maintained-contact rocker switch for contactor control. Push forward for maintained contact and backward for momentary contact. Includes 26.5 ft (8 m) cord and 14-pin plug.

## Genuine Miller Accessories (continued)

### Trailers and Hitches

#### HWY-1000 Trailer #195 013

A 1000 lb (454 kg) capacity highway trailer with welded steel tubing frame, heavy-duty axle with roller bearing hubs and leaf-spring suspension. The HWY-1000 comes with jack stand, 2 in (50 mm) ball hitch, fenders and lights.



#### Cable Tree #195 023

Provides an area to conveniently wrap weld cables and extension cords on the HWY-1000 trailer.

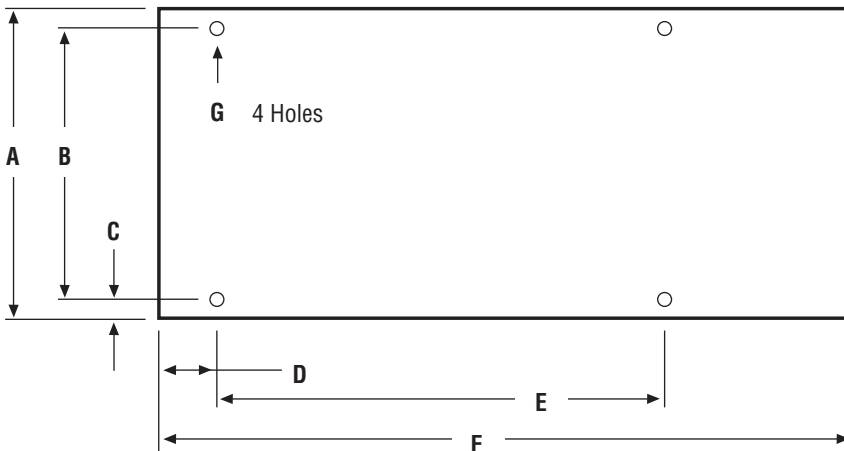
#### Lunette Eye 2-1/2 in (64 mm) #043 824

### Trailer Specifications (Subject to change without notice.)

Model	Gross Axle Weight Rating	Gross Vehicle Weight Rating	Net Payload	Height of Bed	Road Clearance	Track (Center to center of tires)	Standard Tires (Standard rating or P-size rating)	Dimensions	Net Weight
HWY-1000	1500 lb (680 kg)	1610 lb (730 kg)	1000 lb (453 kg)	18-1/2 in (470 mm)	6-1/2 in (165 mm)	50 in (1.27 m)	4.8-12	Length: 98 in (2489 mm) Width: 57-1/2 in (1461 mm)*	265 lb (120 kg)

\*Width at outside of fenders.

## Mounting Specifications



- A. 18 in (457 mm)
- B. 16-1/2 in (419 mm)
- C. 3/4 in (19 mm)
- D. 3-1/8 in (79 mm)
- E. 32-3/4 in (832 mm)
- F. 45-1/2 in (1156 mm)  
48 in (1219 mm) (Diesel)
- G. 13/32 in (10 mm) diameter

#### Overall Dimensions

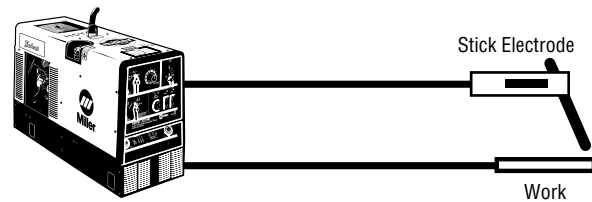
- Height: 33 in (838 mm)
- Width: 18-3/4 in (476 mm)
- Depth: 45-1/2 in (1156 mm)  
48 in (1219 mm) (Diesel)

# Typical Installations



## IMPROVED! Stick (SMAW) Basic Equipment

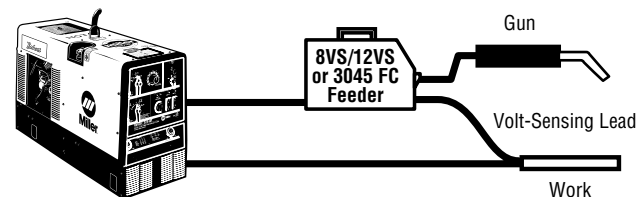
- Four-position range switch provides fine amperage control for typical electrode diameters (3/32, 1/8, 5/32 and 3/16 in).
- AC weld output for good arc quality with iron powder electrodes without fighting magnetic arc blow.
- Strong auxiliary power while welding — for example, if you are welding at 250 amps the Bobcat delivers 2,200 watts of power to run tools, lights etc.



## IMPROVED! Flux-Cored (FCAW) Basic Equipment

Suitcase 8VS #194 890  
 Suitcase 12VS #194 941  
 Ironmate FCAW (350 A) 15 ft gun #195 729  
 3045 FC with 10 ft gun #194 919

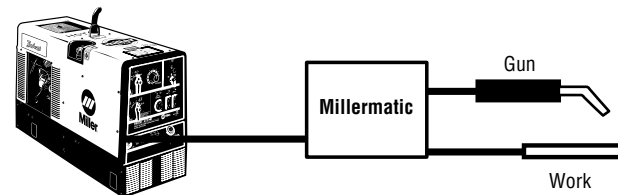
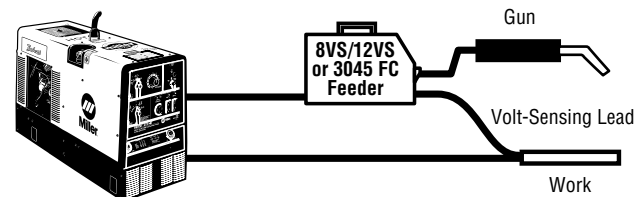
- 275 amps at 25 volts, 60% duty cycle (250 amps at 28 volts, 100% duty cycle). Strong output allows higher travel speeds and deposition rates than competitive machines.
- High voltage output ratings (28 volts at 250 amps) help to compensate for voltage drop across long weld cables.



## MIG (GMAW) Basic Equipment

Suitcase 8VS #194 890  
 Suitcase 12VS #194 941  
 Roughneck MIG Gun C-3015 (300 A) 15 ft #194 753  
 3045 FC with 10 ft gun #194 919

- Use .035 in solid wire with 75/25 argon mixed gas for welding down to 16 gauge steel.
- Use .045 solid wire with a minimum of 80% argon gas for spray transfer on 1/8 in and thicker material (flat and horizontal position).
- Millermatic machines utilize generator power.

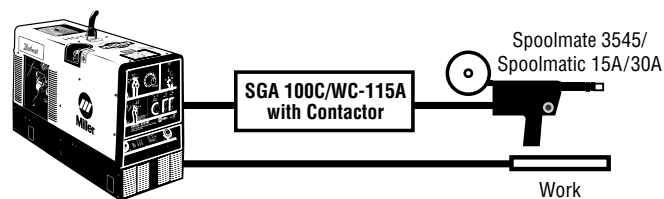


## IMPROVED! Aluminum MIG (GMAW) Basic Equipment

Spoolmate 3545 #195 015  
 SGA 100C #043 857

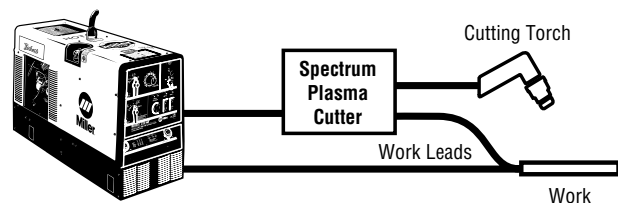
Spoolmatic 15A #195 156  
 Spoolmatic 30A #130 831  
 WC-115A Control #137 546-01-1

- Excellent results from 1/8 – 1/2 in thick fillet welds.



## Plasma Basic Equipment

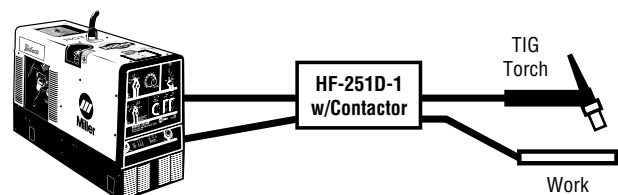
- Spectrum machines utilize generator power.
- Quality cuts with an optional Spectrum plasma cutter.
- Replace heavy oxy-fuel cylinders with a lightweight, fast and versatile Spectrum plasma cutter.
- Most plasma units require a separate air source.



## TIG (GTAW) Basic Equipment

HF251D-1 #042 388  
 Secondary Contactor #041 969  
 RMLS-14 Switch #129 337

- Excellent DC TIG capabilities
- Non-critical AC TIG welding (no remote amperage control available on the Bobcat)



# Ordering Information

Equipment and Options	Stock No.	Description	Qty.	Price
<b>Power Source</b>				
<b>Bobcat™ 250 NT (Onan by Robin) Gas</b>	<b>#907 039</b> <b>#907 039-01-2</b>	Base model w/Onan by Robin engine With GFCI Protection		
<b>Bobcat™ 250 NT (Kohler) Gas</b>	<b>#903 810</b> <b>#903 810-01-2</b> <b>#903 810-01-3</b> <b>#903 810-02-7</b> <b>#903 810-03-4</b>  <b>#903 810-01-4</b>	Base model w/Kohler engine With Electric Fuel Pump (recommended for high altitude) With GFCI Protection With GFCI Protection and Battery Charger* (12, 24, and 36 V), no AC weld With GFCI Protection and LP Gas Conversion, CSA (Requires LP Tank Mounting Bracket (#043 647), LP derates output 5% approx.) With CSA		
<b>Bobcat™ 250 D NT (Kubota) Diesel</b>	<b>#907 071</b> <b>#907 071-01-1</b> <b>#907 071-01-2</b> <b>#907 071-02-3</b>	Base model w/Kubota engine With Dry Battery (International) With GFCI Protection With GFCI Protection and Battery Charger* (12, 24, and 36 V), no AC weld		
<b>General Accessories and Options</b>				
No. 27 Running Gear	<b>#043 014</b>			
LP Tank Mounting Bracket	<b>#043 647</b>	Cannot be used with No. 27CR Cylinder Rack		
No. 4B Running Gear	<b>#041 930</b>			
No. 27CR Cylinder Rack	<b>#043 040</b>	Cannot be used with LP Tank Mounting Bracket		
Protective Cover	<b>#195 136</b>	Blue, with logo		
Full KVA Plug	<b>#119 172</b>	Available through Service Parts		
Spark Arrestor	<b>#043 579</b>			
GFCI Field Kit	<b>#195 192</b>			
Engine Tune-Up Kits		See page 4		
<b>Stick Accessories</b>				
No. 2 Stick Cable Set, 15 ft	<b>#195 196</b>	Includes 15 ft, No. 2 electrode cable and holder, and 15 ft work cable and clamp		
No. 2 Stick Cable Set, 50 ft	<b>#195 195</b>	Includes 50 ft, No. 2 electrode cable and holder, and 50 ft work cable and clamp		
Stick Electrodes				
<b>Flux Cored/MIG Accessories</b>				
SuitCase 8VS™	<b>#194 890</b>	Includes contactor kit and gas valve. Requires drive rolls		
SuitCase 12VS™	<b>#194 941</b>	Includes contactor kit and gas valve. Requires drive rolls		
Flux Cored/MIG Guns		See Lit. Index No. M/10.0		
3045 FC Feeder	<b>#194 919</b>	See Lit. Index No. M/6.6		
Spoolmatic® 15A/30A	<b>#195 196 / #130 831</b>	See Lit. Index No. M/1.5		
WC-115A Control	<b>#137 546-01-1</b>	Includes contactor. See Lit. Index No. M/1.5		
Spoolmatic® 3545	<b>#195 015</b>	150 A, 20 ft (6.0 m) cable assembly		
SGA 100C	<b>#043 857</b>	Required to connect Spoolmate 3035 and 3545 to CV engine drive		
Millermatic® 135	<b>#907 019</b>	See Lit Index No. DC/12.43		
Millermatic® 175	<b>#907 020</b>	See Lit Index No. DC/12.44		
Millermatic® 210	<b>#907 046</b>	See Lit Index No. DC/12.46		
Millermatic® Vintage	<b>#903 355</b>	See Lit Index No. DC/12.45		
Drive Roll Kit, Gun Consumables				
<b>Plasma Cutting Accessories</b>				
Spectrum® Thunder	<b>#903 741</b>	115 V, 20 ft torch. Cuts up to 3/16 in mild steel. See Lit. Index No. PC/13.0		
Spectrum® 375 CutMate™	<b>#903 891</b>	115/230 V, 20 ft torch. Cuts up to 3/8 in mild steel. See Lit. Index No. PC/9.1		
Spectrum® 625 CutMate™	<b>#907 058</b>	230 V, 25 ft torch. Cuts up to 1/2 in mild steel. See Lit. Index No. PC/9.5		
Spectrum® 2050	<b>#950 701</b>	Auto-Line™, 25 ft torch. Cuts up to 3/4 in mild steel. See Lit. Index No. PC/7.0		
<b>TIG Accessories</b>				
HF-251D-1	<b>#042 388</b>	Requires Secondary Contactor Kit		
Secondary Contactor Kit	<b>#041 969</b>			
RMLS-14 Contactor Switch	<b>#129 337</b>	Activates HF251D-1 Contactor. See Lit. Index No. AY/14.0		
Water Coolant Systems		See Lit. Index No. AY/7.2		
TIG Torch, Consumables, Tungsten				
<b>Trailers and Hitches</b>				
HWY-1000 Trailer	<b>#195 013</b>			
Cable Tree	<b>#195 023</b>			
Lunette Eye	<b>#043 824</b>	2-1/2 in (64 mm)		

Date:

Total Quoted Price:

Distributed by:

