Big Blue 500 X and 600 X Diesel Engine-Driven Welder/AC Generator



Quick **Specs**

Heavy Industrial Applications

Heavy construction Structural steel Maintenance and repair rigs Mining maintenance Process piping Sheet metal

Processes

Stick (SMAW) DC TIG (GTAW) Air carbon arc (CAC-A)

500 X

Rated: 8 mm (5/16 in.) carbons Capable: 9.5 mm (3/8 in.) carbons

Rated: 9.5 mm (3/8 in.) carbons

Output Range

500 X CC DC stick: 55-500 A, DC/TIG: 55-500 A 600 X CC DC stick: 55-600 A, DC/TIG: 55-600 A

Generator Output Rated at 104°F (40°C)

5,500 watts peak, 4,000 watts continuous

Accu-Rated™-Not Inflated **Generator Power**



Heavy-duty low-speed industrial diesel engine

is designed to operate over 10.000 hours before the first basic overhaul. Backed by worldwide support and service.

Meter maintenance displays

- · Fuel gauge
- · Hour meter function
- Oil change interval
- · High coolant temperature and low oil pressure shutdowns
- Low fuel shutdown engine shuts down before system runs out of fuel, making restarts easy.

Arc-Drive™ makes welding easy. Automatically enhances stick welding, especially on pipe, by focusing the arc and preventing the electrode from going out.



Miller engine drives are tested to perform in high-temperature climates, even at the highest recorded temperature on earth -56.7°C*. They are designed to excel in extreme heat by optimizing engine cooling, reducing harmful environmental effects. In addition, the machines are equipped with thermal overload protection which prevents machine damage if the duty cycle is exceeded, the airflow is blocked, or if the thermostat detects overheating.

*According to the World Meteorological Organization Global Weather & Climate Extremes Archive (https://wmo.asu.edu/content/worldhighest-temperature)



Big Blue 600 X CC shown.

Hot Start™ provides positive stick electrode starts making it easy to start all types of electrodes and it also works great for bead tie-ins.

Three-phase rotating field generator efficiently produces smooth DC weld output using 20 to 30 percent less fuel than a rotating armature-type DC generator.

Enclosed robust case design protects internal components from impact and allows air flow to cool and prolong the life of the engine. Also reduces sound levels.

Quick and easy maintenance with single-side access to oil level check, oil fill, oil filter, fuel filter and air cleaner.

Remote toolless oil drain allows oil to be drained without getting under the engine and reduces the chance of oil spillage.

HD powder coat with zinc-rich primer protects sheet metal from rust and corrosion.

GFCI receptacle as required on most iobsites to protect operators from electrical hazards.

CSA, IEC and NEMA compliant for welders. Degree of protection provided by enclosure IP23.



Welder/generator is warrantied by Miller for three years, parts and labor. Engine is warrantied separately by engine manufacturer.



Miller Electric Mfg. LLC

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Equipment Sales US and Canada

Phone: 866-931-9730 FAX: 800-637-2315

International Phone: 920-735-4554 International FAX: 920-735-4125











Specifications (Subject to change without notice.)

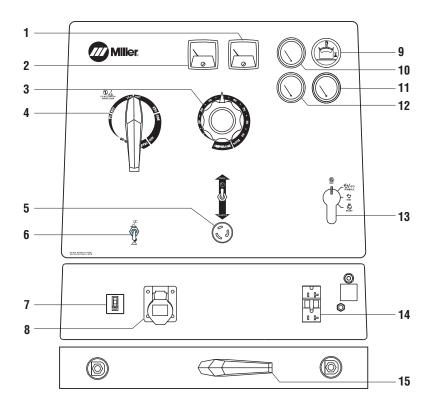




| Model | Weld Mode/ Process | Weld Output Range | Weld Output Rated at 40°C (104°F) | Max. Open- Circuit Voltage | Generator Output Rated at 40°C (104°F) | Dimensions** | Weight (without fuel)*** |
|----------------------|-----------------------|----------------------|---|-------------------------------|---|---|---|
| Big Blue 500 X CC | CC/DC (Stick/TIG) | 55-500 A | 400 A at 36 V, 100% duty cycle* 450 A at 38 V, 60% duty cycle 500 A at 30 V, 40% duty cycle | 92 | 5,500 watts peak 4,000 watts continuous 1-phase, 34/17 A, | H: 1,092 mm (43 in.) W: 724 mm | Deutz D2011L03i : 751 kg (1,655 lb.) |
| Big Blue 600 X CC | CC/DC (Stick/TIG) | 55-600 A | 500 A at 40 V, 100% duty cycle* 550 A at 34 V, 60% duty cycle 600 A at 30 V, 40% duty cycle | | 120/240 V, 50/60 Hz while welding | (28.5 in.) D: 1,654 mm (65.125 in.) | Deutz D2011L04i: 769 kg (1,695 lb.) |

^{*}Meets NEMA and IEC output ratings. **Additional 178 mm (7 in.) to top of exhaust. ***Additional 86 kg (190 lb.) when fuel tank is full.

Control Panel



- 1. DC Ammeter*
- 2. DC Voltmeter*
- 3. Amperage Adjust Control
- 4. Amperage Range Switch
- **5.** Amperage Adjust Switch and Remote Amperage Adjust Receptacle
- 6. Stick/TIG Selector Switch
- 7. Earth Leakage Circuit Breaker
- 8. 230 V, 16 A Pin and Sleeve Receptacle
- 9. Fuel Gauge/Hour Meter/Oil Change Interval/Engine Shutdown Indicator
- 10. Engine Oil Pressure Gauge
- 11. Battery/Voltmeter*
- 12. Engine Coolant Temperature Gauge
- **13.** Engine Control Switch
- 14. 120 V, 20 A GFCI Duplex Receptacle
- 15. Polarity Switch*
- *Optional.

Additional Features

Proven, rugged rheostat control technology that has been in Miller engine drives for over 60 years. Contains no printed control boards.

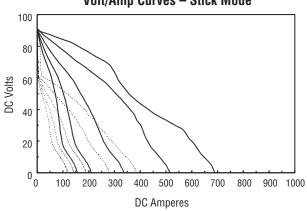
A **stick/TIG switch** optimizes open-circuit voltage for stick welding and allows the open-circuit voltage to be lowered for scratch start TIG welding.

Provisions are provided to plug a **RHC3GD34A remote control** that will allow precise adjustment of amperage without walking back to the machine.

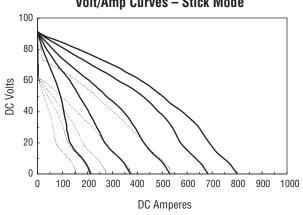


Performance Data

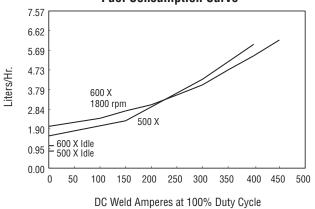
500 X CC Volt/Amp Curves – Stick Mode

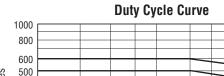


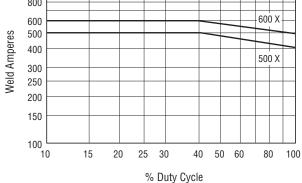




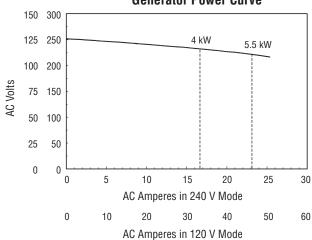
Fuel Consumption Curve







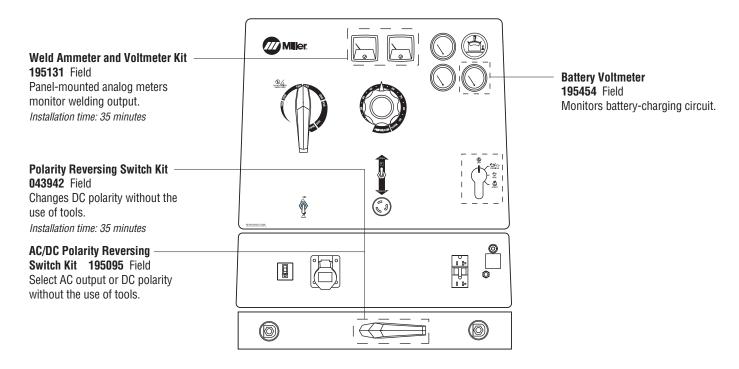
Generator Power Curve



Engine Specifications (Subject to change without notice.)

| Model | Engine Brand | Features | НР | Туре | Engine Speeds | Capacities | Automatic Engine Shutdowns |
|----------------------|--------------------|--|------|---|--------------------|--|---|
| Big Blue 500 X | Deutz D2011L03i | EPA Tier 4i compliant engine with full load sound levels of 76.8 dB at 7 m (101.7 Lwa). Right-side service access with intervals of 1,000 hours for oil and filters . Approved underground operation with the purchase of a MSHA (30 CFR part 7) certificate. | 32.0 | Direct-injected three-cylinder, air/oil-cooled industrial diesel | Weld: 1,850 rpm | Fuel: 95 L (25 gal.) Oil: 5.9 L (6.2 qt.) Coolant: Integrated oil | Low oil pressure, high coolant temperature, low fuel level |
| Big Blue 600 X | Deutz D2011L04i | EPA Tier 4i compliant engine with full load sound levels of 76 dB at 7 m (101 Lwa). Right-side service access with intervals of 1,000 hours for oil and filters . | 48.6 | Direct-injected four-cylinder, air/oil-cooled industrial diesel | Weld: 1,850 rpm | Fuel: 95 L (25 gal.) Oil: 8.5 L (9 qt.) Coolant: Integrated oil | Low oil pressure, high coolant temperature, low fuel level |

Genuine Miller® Options





Genuine Miller® Accessories



International Plug 255416 Field 1-phase, 240 V, 16 A plug

Engine Filter Kit 246988 Field Includes all filters required for proper engine maintenance. Oil filter, primary and secondary fuel filter, and primary air filter.



Spark Arrestor Kit 195012 Field Prevents particles from leaving the muffler that could

potentially start a fire. (Mandatory when operating on California grasslands, brush, or forest-covered land, and in all national forests. For other areas, check your local laws. Meets U.S. Forest Service standard 5100-1B.)



FA-1D Lockable Flame Arrestor Fuel Cap 043947 Field

Fuel cap can be padlocked to prevent vandalism. A built-in flame arrestor prevents flames or sparks from entering the fuel tank.



Vandalism Lockout Kit 195118 Field

Lockable hinged steel panels cover and protect name plate gauges and ignition switch (padlock included). Also includes engine compartment door lock and key.



Cable Holder 043946 Field

Saddle-bag-style cable holder. Convenient wrap-around storage of coiled cable for transportation. Stores 30.5 m of 2/0 cable on each side.

Note: For best results do not weld when cable is coiled! Protective cover cannot be used with cable holder.



Protective Cover 194683 Field

Blue water-resistant canvas cover resists stains and mildew, and protects the finish of your welder.

Note: Protective cover cannot be used with cable holder.

Stick (SMAW) Welding



Weld Leads

2/0 Stick Cable Set, 15 m (50 ft.) 173851

Consists of 15 m (50 ft.) 2/0 electrode cable with holder, and 15 m (50 ft.) work cable with clamp. 350 A, 100% duty cycle.

2/0 Stick Cable Set, 30.5/15 m (100/50 ft.) 043952

Consists of 30.5 m (100 ft.) 2/0 electrode cable with holder, and 15 m (50 ft.) work cable with clamp. 300 A, 100% duty cycle.

AC TIG (GTAW) Welding



Dynasty® 210 Series

For portable AC/DC TIG. See literature AD/4.81.

Plasma Cutting



Spectrum® 375 X-TREME™ 907529 Comes complete with protective X-CASE™ (not shown). See literature PC/9.2.

Remote Control



RHC-3GD34A Remote Hand Control 041122 Allows for precise adjustment of amperage. Includes 6 m (20 ft.) cord.



Trailers and Hitches (Note: Trailers are shipped unassembled.)



4 West Four-Wheel Steerable Off-Road Trailer 042801

A heavy-duty 1,166 kg (2,570 lb.) capacity trailer designed for use in mines, quarries, and other rough terrain. Has narrow 6.7 m (22 ft.) turning radius. Includes 76 mm (3 in.) lunette eye, universal hitch and safety chains.



HWY-225 Trailer 301338

A 1,225 kg (2,700 lb.) capacity highway trailer with welded steel tubing frame, heavy-duty axle with roller bearing hubs and leaf-spring suspension. Includes jack stand, fenders, lights, and dual hitch with 50 mm (2 in.) ball hitch and 76 mm (3 in.) lunette eye.

Cable Tree 043826

Provides an area to conveniently wrap weld cables and extension cords.



2-In-1 Document/ Fire Extinguisher Holder 301236

For use with HWY-225. Stores documents and holds a 5-pound fire extinguisher.

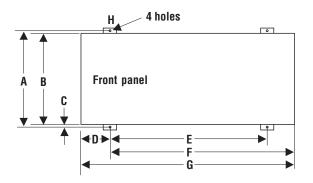
Note: Holder shown mounted on trailer. Fire extinguisher not included.

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 |
|---------|---------------------------------|--------------------------------|-------------------------|-----------------------|---------------------|---|---|--|---------------------|
| 4 West | 907 kg/axle (2,000 lb./axle) | 1,361 kg (3,000 lb.) | 1,157 kg (2,550 lb.) | 540 mm (21.25 in.) | 203 mm (8 in.) | 1,403 mm (55.25 in.) | B78-13 | Length: 2,311 mm (91 in.)* Width: 1,556 mm (61.25 in.) | 191 kg (420 lb.) |
| HWY-225 | 1,588 kg (3,500 lb.) | 1,360 kg (2,999 lb.) | 1,225 kg (2,700 lb.) | 483 mm (19 in.) | 191 mm (7.5 in.) | 1,270 mm (50 in.) | ST175/80R-13 Load Range D | Length: 2,680 mm (105.5 in.) Width: 1,435 mm (56.5 in.)** | 127 kg (280 lb.) |

^{*} Does not include tongue. **Width at outside of fenders.

Mounting Specifications



- **A.** 757 mm (29.812 in.)
- **B.** 699 mm (27.5 in.)
- **C.** 25 mm (1 in.)
- **D.** 244 mm (9.625 in.)*
- E. 1,181 mm (46.5 in.)*
- F. 1,422 mm (56 in.)*
- **G.** 1,654 mm (65.125 in.)
- H. 14 mm (.562 in.) diameter

*With mounting brackets in center position. Dimensions vary with location of mounting brackets. Height: 1,270 mm (50 in.)

(to top of exhaust)

Width: 724 mm (28.5 in.)

(mounting brackets turned in)

781 mm (30.75 in.)

(mounting brackets turned out)

Depth: 1,654 mm (65.125 in.)

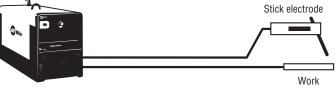


Typical Installations

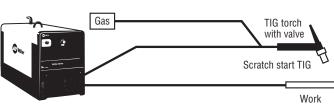
Electrode Hot



Stick (SMAW) Basic Equipment



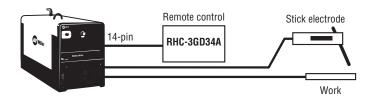




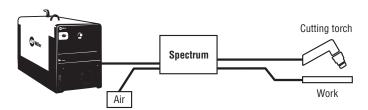
Remote On/Off Required



Stick (SMAW) Basic Equipment RHC-3GD34A 041122









Ordering Information

| Equipment and Factory Options | Stock No. | Description | Qty. | Price |
|--|-----------|---|------|-------|
| Big Blue® 500 X CC | 907185 | Deutz D2011L03i with engine gauges | | |
| Big Blue® 600 X CC | 907193 | Deutz D2011L04i with engine gauges | | |
| Field Options and Accessories | | | | |
| Weld Ammeter and Voltmeter Kit | 195131 | Analog welding meters | | |
| Polarity Reversing Switch Kit | 043942 | DC polarity switch | | |
| | 195095 | AC/DC polarity switch | | |
| Battery Voltmeter | 195454 | Analog | | |
| International Plug | 255416 | 1-phase, 240 V, 16 A | | |
| Engine Filter Kit | 246988 | Includes air, oil and fuel filters | | |
| Spark Arrestor Kit | 195012 | Horizontal externally mounted | | |
| FA-1D Lockable Flame Arrestor Fuel Cap | 043947 | Padlock NOT included | | |
| Vandalism Lockout Kit | 195118 | Lockable front control panel and engine compartment | | |
| Cable Holder | 043946 | Stores up to 61 m (200 ft.) of 2/0 weld cable | | |
| Protective Cover | 194683 | Canvas cover — will not fit over machine with cable holder attached | | |
| Stick Welding | | | | |
| Weld Leads | 173851 | 2/0, 350 A, 100% duty cycle, 15 m (50 ft.) stinger, 15 m (50 ft.) work clamp | | |
| | 043952 | 2/0, 300 A, 100% duty cycle, 30.5 m (100 ft.) stinger, 15 m (50 ft.) work clamp | | |
| AC TIG Welding | | | | |
| Dynasty® 210 Series | | See literature AD/4.81 | | |
| Plasma Cutting | | | | |
| Spectrum® 375 X-TREME™ | 907529 | Includes X-CASE™. See literature PC/9.2 | | |
| Remote Control | | | | |
| RHC-3GD34A Hand Control | 041122 | | | |
| Trailers and Hitches | | | | |
| 4 West Four-Wheel Steerable Trailer | 042801 | Trailer with lunette eye, universal hitch and safety chains. For off-road use | | |
| HWY-225 Trailer | 301338 | Trailer with lights, fenders and dual hitch. For highway use | | |
| Cable Tree | 043826 | Trailer-mounted cable holder for HWY-225 | | |
| 2-In-1 Document/Fire Extinguisher Holder | 301236 | Stores documents and holds a 5-pound fire extinguisher for HWY-225 | | |

Date: Total Quoted Price:

Distributed by:

