Big Blue® 500 Pro

Processes
- Stick (SMAW)
- MIG (GMAW)
- Flux-cored (FCAW)
- RMD®
- Pulsed MIG (GMAW-P)*
- DC TIG (GTAW)
- Air carbon arc (CAC-A)
  3/8-inch (9.5 mm) carbons

Heavy Industrial
Applications
- Heavy construction
- Structural steel
- Mining maintenance
- Maintenance and repair rigs
- Process piping

Output Range
- DC stick/TIG 20–500 A
- DC MIG/FCAW 14–50 V

Generator Output Rated at 104°F (40°C)
- 3-phase 27,000 watts peak, 20,000 watts continuous
- 1-phase 15,000 watts peak, 12,000 watts continuous

*Available only on ArcReach models.

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Kubota @ Perkins

Heavy-duty low-speed T4F and T4i industrial diesel engines.
The cleanest, greenest diesel power available. Kubota T4F models utilize diesel oxidation catalyst (DOC) technology to keep the air clean with NO exhaust aftertreatment maintenance.

Electronic engine display (Kubota USA models)
simultaneously displays fuel level, engine hours, coolant temperature, oil pressure, battery volts and engine rpm. Also tracks oil change intervals and displays engine diagnostics for quick and easy servicing.

ArcReach

Remote control of the power source without a cord. See pages 2 and 3.

TRUE BLUE®

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

Welds World®

International models available

DURABLE
BUILT TO LAST

Built to last in harsh industrial environments

SUPERIOR ARC
PERFORMANCE

New standard for productivity and weld quality

FLEXIBLE

Easy to add capabilities

Miller Electric Mfg. LLC
An ITW Welding Company
1635 West Spencer Street
P.O. Box 1079
Appleton, WI 54912-1079 USA

Phone: 866-931-9730
FAX: 800-637-2315
International Phone: 920-735-4554
International FAX: 920-735-4125
Big Blue® 500 Pro Features and Controls

Digital meters with SunVision™ technology enable welding parameters to be viewed with greater clarity than analog meters — at virtually any angle. Meters can be seen clearly even in direct sunlight.

Standard 14-pin receptacle with Auto-Remote Sense™ for simple connection of remote controls and wire feeders.

Industrial USB port. Quickly upload the latest software and download machine log files to retrieve in-depth information such as diagnostics and machine statistics.

Low OCV stick (VRD), when enabled, reduces the open-circuit voltage to 30 volts when the welding power source is not in use, increasing operator safety without compromising arc starts.

Standard features include adjustable Hot Start™, output contactor control, automatic idle, thermal overload protection and 120-volt block heater.

Arc control is beneficial when welding with stick and solid wires for easier fine-tuning of tough-to-weld materials and out-of-position applications.

20,000 watts of pure generator power. Plug in an extra Miller® inverter-based power source for a second welding arc!

Polarity reversing switch (Deluxe models only) Quickly change welding polarity, without having to change over cables.

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

Quiet operation. Improves worksite communication.

Note: See page 4 for specific international specs and CE ratings.
**Big Blue® 500 Pro ArcReach® Additional Features**

**ArcReach provides remote amperage and voltage control at the weld joint without needing a control cord.**

- **More arc-on time and reduced exposure to workplace hazards** for operators can be realized using ArcReach because less time is spent going back to the welding power supply to set process and arc amperage or voltage.
- **Auto-Process Select.** Depending on connected accessory, the system automatically changes to stick or MIG/FCAW (with gas) if electrode positive polarity is detected or TIG or FCAW (no gas) if electrode negative polarity is detected, when ArcReach communication is established between the accessory and the Big Blue 500 Pro — reducing the need to access the power supply.
- **Remote override of Big Blue 500 Pro.** When an ArcReach accessory is connected to a Big Blue the accessory has full control and the Big Blue controls are disabled. While under ArcReach control, process and voltage/amperage adjustments are locked out, preventing accidental changes by personnel other than the welding operator.

**Improved weld quality**

- **Improved weld quality**

**Increased productivity**

**Operator can precisely set arc amperage or voltage at the weld joint and monitor the actual arc voltage and current delivered to the weld using the digital meters on the accessory. This removes guesswork when it comes to adhering to weld procedures.**

**Further productivity gains**

- **Save time** by no longer needing to troubleshoot welding system problems that result from damaged control cords.
- **Eliminate costly control cord repairs** because control cords are not used.

**Reduced maintenance**

- **Cross platform compatible.** The same ArcReach accessories that work on engine-driven equipment can also be used on select ArcReach-equipped XMT® and Dimension™ power sources.
- **Reverse compatible.** ArcReach-equipped power sources work with non-ArcReach accessories; however, the complete ArcReach benefit is only realized with the ArcReach system.

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**Big Blue® 500 Pro ArcReach® System and Accessories**

**Big Blue 500 Pro ArcReach system** (see page 8 for engine drive models/stock numbers), ArcReach SuitCase® 12 feeder with Bernard™ S-Gun™ (951730), ArcReach Stick/TIG Remote (301325), and ArcReach Smart Feeder with Bernard PipeWorx 300-15 MIG gun (951733).

**ArcReach SuitCase 8 and 12 feeders for MIG or flux-cored welding**

- Remote voltage control
- Polarity indication
- Auto-Process Select™

**ArcReach Stick/TIG Remote for stick or TIG welding**

- Remote amperage control
- Polarity indication
- Arc control for stick
- Auto-Process Select™

**ArcReach Smart Feeder for advanced wire processes**

- RMD® and pulsed MIG processes
- Remote voltage control
- Store and recall weld settings
### Specifications

<table>
<thead>
<tr>
<th>Weld Mode/Process</th>
<th>Weld Output Range</th>
<th>Weld Output Rated at 104°F (40°C)</th>
<th>Max. Open-Circuit Voltage</th>
<th>Generator Power Output Rated at 104°F (40°C)***</th>
<th>Dimensions</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC/DC (Stick/TIG)</td>
<td>20–500 A</td>
<td>Kubota USA models 400 A at 36 V, 100% duty cycle* 450 A at 38 V, 100% duty cycle* 500 A at 40 V, 100% duty cycle* Perkins International model 400 A at 36 V, 100% duty cycle* 450 A at 33 V, 60% duty cycle 500 A at 30 V, 40% duty cycle</td>
<td>92 VDC 30 VDC**</td>
<td>Kubota USA models 3-phase: 27,000 watts peak, 20,000 watts continuous 1-phase: 15,000 watts peak, 12,000 watts continuous Perkins International model 3-phase: 21,000 watts peak, 15,000 watts continuous 1-phase: 15,000 watts peak, 12,000 watts continuous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CV/DC (MIG/FCAW)</td>
<td>14–50 V</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Meets NEMA and IEC ratings. **Sense voltage for stick and Lift-Arc™ TIG. ***Will operate either 60 hertz or 50/60 hertz power tools, lights, etc.

Certified by Canadian Standards Association to both the Canadian and U.S. Standards. Perkins-powered International model is approved.

### Engine Specifications

<table>
<thead>
<tr>
<th>Engine Brand</th>
<th>Features</th>
<th>HP</th>
<th>Type</th>
<th>Engine Speeds</th>
<th>Sound Levels at 23 ft. (7 m)</th>
<th>Capacities</th>
<th>Automatic Engine Shutdown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kubota V2403</td>
<td>EPA Tier 4 Final compliant, includes 120 V block heater and automatic glow plugs</td>
<td>48.9</td>
<td>Turbo-charged four-cylinder liquid-cooled industrial diesel</td>
<td>Idle: 1,350 rpm  Weld: 1,800 rpm</td>
<td>Idle: 65.9 dB (90.7 Lwa)  Weld: 74.3 dB (99.1 Lwa)</td>
<td>Fuel: 25 gal. (95 L)  Oil: 10 qt. (9.5 L)  Coolant: 9 qt. (8.5 L)</td>
<td>Low oil pressure, high coolant temperature, low fuel level</td>
</tr>
<tr>
<td>Perkins 4040.22</td>
<td>EPA Tier 4i compliant, includes 120 V block heater and glow plugs</td>
<td>32.6</td>
<td>Four-cylinder liquid-cooled industrial diesel</td>
<td>Idle: 1,350 rpm  Weld: 1,800 rpm</td>
<td>Idle: 63.4 dB (88.2 Lwa)  Weld: 72.2 dB (97 Lwa)</td>
<td>Fuel: 25 gal. (95 L)  Oil: 9 qt. (8.5 L)  Coolant: 9 qt. (8.5 L)</td>
<td>Low oil pressure, high coolant temperature, low fuel level</td>
</tr>
</tbody>
</table>

### Performance Data

#### Fuel Consumption Curve

![Fuel Consumption Curve](chart.png)

#### Simultaneous Welding and Power

<table>
<thead>
<tr>
<th>Weld Amperes</th>
<th>Total Aux. Power Available (Watts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kubota USA Models</td>
<td>Perkins International model</td>
</tr>
<tr>
<td>1-Ph*</td>
<td>3-Ph</td>
</tr>
<tr>
<td>No Weld Output</td>
<td>16,000</td>
</tr>
<tr>
<td>200 A at 28 V</td>
<td>16,000</td>
</tr>
<tr>
<td>300 A at 32 V</td>
<td>13,000</td>
</tr>
<tr>
<td>400 A at 36 V</td>
<td>9,000</td>
</tr>
<tr>
<td>450 A at 38 V</td>
<td>6,500</td>
</tr>
<tr>
<td>500 A at 40 V</td>
<td>4,500</td>
</tr>
</tbody>
</table>

*Single-phase listings include 4,000 watts from the exciter stator.
Function Guide

1. Self-calibrating digital weld meters with fault code indication display preset or actual weld parameters.
2. Weatherproof Lexan® nameplate is super durable and resists cracking and fading.
3. Weld process selection switch
4. Pushbutton main control knob used for adjusting amperage/voltage, adjusting arc control, and accessing the service menu.
5. USB port allows software updates from a USB drive. A summary file of recorded data from the unit will be saved to a USB drive that is inserted.
6. Adjustable arc control adjusts DIG when process control is in stick modes and adjusts inductance when process control is in FCAW or MIG modes. The amount of DIG determines how much amperage (heat) varies with stick arc length. Inductance determines the “wetness” of the weld puddle.
7. Electronic engine display can display fuel level, engine hours, coolant temperature, oil pressure, battery volts, and engine rpm simultaneously or one at a time. Also tracks oil change intervals and displays engine diagnostics for service technicians.
8. Maintenance interval reminder. Yellow and red indicator lights let an operator know when the machine is approaching and finally in need of routine maintenance.
9. Fuel indicator gauge. Low fuel shutdown shuts engine off prior to running out of fuel to prevent loss of fuel in the system, and make restarts easy.
10. Standard 14-pin receptacle for simple connection of remote controls and wire feeders. Includes Auto Remote Sense™ which automatically switches from panel to remote amperage/voltage (A/V) control with remote connected. Eliminates confusion of a panel/remote switch.
11. Engine control switch is used to start engine and then select between auto idle and high speed lock.
12. Glow plugs assist in cold weather starting.
13. Optional polarity reversing switch changes DC polarity without the use of tools.
14. Weld output terminals

15. 50 A, 240 V, three-phase receptacle
   (For matching plug, order 254140.)
16. 50 A, 120/240 V receptacle (For matching plug, order 119172.)
17. 20 A, 240 V receptacles
18. 20 A, 120 V receptacles with ground fault
19. 50 A circuit breaker
20. 20 A, 240 V circuit breaker
21. 20 A, 120 V circuit breakers
22. 20 A, 120 V receptacles with ground fault
23. 240 V earth leakage circuit breaker
24. 32 A, 400 V three-phase receptacle
   (For matching plug, order 255421.)
25. 30 A, three-phase circuit breaker
26. 120 and 240 V circuit breakers
27. 16 A, 120/240 V receptacles
   (For matching plugs, order 255419 for 120 V and 255416 for 240 V.)
Genuine Miller® Accessories

### Polarity Reversing Switch Kit 301112
Field Standard on Deluxe models. Changes DC polarity without the use of the tools.

### Full KVA Adapter Cord 300517
Field NEMA 14-50P to NEMA 6-50R. Adapts engine drive 120/240 V plug to common Millermatic® and Spectrum® 240 V plug.

### Full KVA Plug Kit Field
119172 1-phase, 120/240 V, 50 A plug (NEMA 14-50P)
254140 3-phase, 240 V, 50 A plug (NEMA 15-50P)

### International Plugs Field
255419 1-phase, 120 V, 16 A plug
255416 1-phase, 240 V, 16 A plug
255421 3-phase, 400 V, 32 A plug

### Engine Filter Kits
273293 Field. For Kubota
246985 Field. For Perkins
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 state and 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 399802
Field Standard on Deluxe models. Lockable hinged steel panels cover and protect name plate gauges and ignition switch (padlock included).

### Cable Holder 043946
Field Saddle-bag-style cable holder. Convenient wrap-around storage of coiled cable for transportation. Stores 100 feet 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 301495
Kubota USA model
194683 Perkins International model
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.

### MIG (GMAW) or Flux-cored (FCAW)

#### SuitCase® 12RC Wire Feeder 951580
Lightweight and flexible enough to run wires up to .062-inch diameter. Includes remote voltage control, drive roll kit and Bernard™ BTB Gun 300 A. See literature M/6.5.

#### ArcReach® Smart Feeder 951733
For use with ArcReach models only (see pages 2 and 3 for more information). Includes drive rolls and Bernard® PipeWorx 300-15 MIG gun. For MIG, FCAW, and advanced RMD® and pulse processes. See literature M/6.55.

#### MIG (GMAW)/Flux-cored (FCAW) Guns
See Bernard™ literature SP-BTB for BTB air-cooled MIG guns, and SP-DF for Dura-Flux™ self-shielded flux-cored guns.

#### Spoolmatic® 30A Spool Gun 130831
Air-cooled, 200-amp, one-pound spool gun for aluminum and stainless MIG. See literature M/1.73. Requires WC-24 Control (137549).

### Stick (SMAW) Welding

#### Weld Leads
2/0 Stick Cable Set, 50 ft. (15 m) 173851
Consists of 50-foot (15 m) 2/0 electrode cable with holder, and 50-foot (15 m) work cable with clamp. 350 A, 100% duty cycle.

2/0 Stick Cable Set, 100/50 ft. (30.5/15 m) 043952
Consists of 100-foot (30.5 m) 2/0 electrode cable with holder, and 50-foot (15 m) work cable with clamp. 300 A, 100% duty cycle.

### XR™ Wire Feeders and Guns
Push-pull system designed to handle difficult-to-feed soft alloy wires such as aluminum. See literature M/1.7 through M/1.74.

### Stick (SMAW) Welding

#### AC TIG (GTAW) Welding

#### Dynasty® 210 Series
For portable AC/DC TIG. See literature AD/4.81.
Plasma Cutting

Spectrum 375 X-TREME and 625 X-TREME shown.

Spectrum® 375 X-TREME™ 907529
See literature PC/9.2.

Spectrum® 625 X-TREME™ 907579
See literature PC/9.6.

Spectrum® 875 907583
See literature PC/9.8.

The Spectrum 375 X-TREME and 625 X-TREME come complete with protective X-CASE™ (not shown).

Stick/TIG Remote Controls

ArcReach® Stick/TIG Remote 301325
When paired with an ArcReach power source, provides remote control of the power source without a cord — saving time and money. See literature AY/14.5.

Wireless Remote Hand Control 300430
For remote current, voltage and contactor control. Receiver plugs directly into the 14-pin receptacle of Miller machine. 300-foot (91.4 m) operating range. Wireless antenna kit 300749 recommended.

Wireless Antenna Kit 300749
Optional when improved reception is desired.

RHC-14 Hand Control 242211020
Miniature hand control for remote current, voltage and contactor control. Dimensions: 4 x 4 x 3.25 inches (102 x 102 x 82 mm). Includes 20-foot (6 m) cord and 14-pin plug.

Extension Cables for 14-Pin Remote Controls or 24 VAC Wire Feeders
242208025 25 ft. (7.6 m)
242208050 50 ft. (15.2 m)
242208080 80 ft. (24.4 m)

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

4 West Four-Wheel Steerable Off-Road Trailer 042801
A heavy-duty 2,550-pound (1,157 kg) capacity trailer designed for use in mines, quarries, and other rough terrain. Has narrow 22-foot (6.7 m) turning radius. Includes 3-inch (76 mm) lunette eye, universal hitch and safety chains.

HWY-225 Trailer 301338
A 2,700-pound (1,225 kg) 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 2-inch (50 mm) ball hitch and 3-inch (76 mm) lunette eye.

Cable Tree 043826
For use with HWY-225. Provides an area to conveniently wrap weld cables and extension cords.

Dual Hitch 301441
For use with HWY-225. 2-inch (50 mm) ball hitch and 3-inch (76 mm) lunette eye in one reversible assembly.

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.

Mounting Specifications

Trailer Specifications (Subject to change without notice.)

<table>
<thead>
<tr>
<th>Model</th>
<th>Gross Axle Weight Rating</th>
<th>Gross Vehicle Weight Rating</th>
<th>Net Payload</th>
<th>Height of Bed</th>
<th>Road Clearance</th>
<th>Track (Center to center of tires)</th>
<th>Standard Tires (Standard rating or P-size rating)</th>
<th>Dimensions</th>
<th>Net Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 West</td>
<td>2,000 lb/axle (907 kg/axle)</td>
<td>3,000 lb. (1,361 kg)</td>
<td>2,550 lb. (1,157 kg)</td>
<td>21.25 in. (540 mm)</td>
<td>8 in. (203 mm)</td>
<td>55.25 in. (1,403 mm)</td>
<td>B78-13</td>
<td>Length: 91 in. (2,311 mm)* Width: 61.25 in. (1,556 mm)</td>
<td>430 lb. (195 kg)</td>
</tr>
<tr>
<td>HWY-225</td>
<td>3,500 lb. (1,588 kg)</td>
<td>2,999 lb. (1,360 kg)</td>
<td>2,700 lb. (1,225 kg)</td>
<td>19 in. (483 mm)</td>
<td>7.5 in. (191 mm)</td>
<td>50 in. (1,270 mm)</td>
<td>ST175/80R-13</td>
<td>Length: 105.5 in. (2,680 mm) Width: 56.5 in. (1,435 mm)**</td>
<td>280 lb. (127 kg)</td>
</tr>
</tbody>
</table>

*Does not include tongue. **Width at outside of fenders.
## Ordering Information

<table>
<thead>
<tr>
<th>Equipment and Options</th>
<th>Stock No.</th>
<th>Description</th>
<th>Qty.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Big Blue® 500 Pro (USA)</strong> EPA Tier 4 Final compliant engine</td>
<td>907736</td>
<td>Kubota. USA base model with 240-volt 3-phase power</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>907736001</td>
<td>Kubota. USA deluxe model with ArcReach®, polarity reversing switch and vandalism lockout kit</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Big Blue® 500X Pro (Int’l) EPA Tier 4i compliant engine</strong></td>
<td>907761</td>
<td>Perkins (CE). International model with 400-volt 3-phase power and ArcReach®</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Field Accessories
- Polarity Reversing Switch Kit | 301112 | Changes DC polarity without the use of tools |
- Full KVA Adapter Cord | 300517 |
- Full KVA Plug Kits | See page 6 |
- International Plugs | See page 6 |
- Engine Filter Kits | See page 6 |
- Spark Arrestor Kit | 195012 |
- FA-1D Lockable Flame Arrestor Fuel Cap | 043947 | Padlock NOT included |
- Vandalism Lockout Kit | 399802 | Lockable front control panel |
- Cable Holder | 043946 | Stores up to 200 feet of 2/0 cable |
- Protective Cover | See page 6. Canvas cover — will not fit over machine with cable holder attached |

### MIG/Flux-cored Welding
- SuitCase® 12RC | 951580 | With Bernard™ BTB Gun 300 A. See literature M/6.5 |
- ArcReach® SuitCase® 8 | 951726 | With Bernard™ BTB Gun 300 A. See literature M/6.55 |
- ArcReach® SuitCase® 12 | 951729 | With Bernard™ BTB Gun 300 A. See literature M/6.55 |
- ArcReach® Smart Feeder | 951733 | MIG/FCAW/RMD®/pulse feeder with Bernard™ PipeWorx 300-15 MIG gun. Tweek®-style connectors. See literature M/6.55 |
- MIG (GMAW) and Flux-cored (FCAW) Guns | See Bernard™ literature SP-BTB and SP-DF |
- Spoolmatic® 30A Spool Gun | 130831 | Requires WC-24 Control. See literature M/1.73 |
- WC-24 Control | 137549 | See literature M/1.73 |
- XR™ Wire Feeder Control and Guns | See literature M/1.7 through M/1.74 |

### TIG Welding
- See page 6 |

### Plasma Cutting
- See page 7 |

### Stick/TIG Remote Controls
- ArcReach® Stick/TIG Remote | 301325 | For use with ArcReach models only |
- Wireless Remote Hand Control | 300430 |
- Wireless Antenna Kit | 300749 |
- RHC-14 Hand Control | 242211020 |
- Extension Cables | See page 7 |

### 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 |
- Dual Hitch | 301441 | Combination 2-inch (50 mm) ball hitch and 3-inch (76 mm) lunette eye in one reversible assembly 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:**

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