PROLINE
professional welding supplies

Big Blue® 400 Pro

Quick Specs

Heavy Industrial Applications
Mechanical contractors
Structural steelwork
Fabrication
Maintenance
Repair
Rental
Construction
Pipe welding

Processes
Stick (SMAW)
MIG (GMAW)
Flux-cored (FCAW)
RMD®*
Pulsed MIG (GMAW-P)*
DC TIG (GTAW)
Air carbon arc (CAC-A)
  Rated: 3/16-inch (4.8 mm) carbons
  Capable: 1/4-inch (6.4 mm) carbons

Output Range DC stick 20−400 A
                  DC TIG 20−400 A
                  FCAW/MIG 14−40 V

Generator Output Rated at 104°F (40°C)
12,000 watts peak, 10,000 watts continuous

Accu-Rated™ – Not Inflated Generator Power

Available only on ArcReach models.

The professional welder's choice — designed with the professional in mind, the Big Blue 400 Pro is the best for ease of use, reliability and fuel economy.

Kubota
Kubota V1505 four-cylinder diesel.

MITSUBISHI ENGINE NORTH AMERICA, INC.
Mitsubishi S4L2 four-cylinder diesel.

CAT Diesel Power
CATERPILLAR C1.5 three-cylinder diesel.

Heavy-duty low-speed T4F and T4i industrial diesel engines are designed to operate over 10,000 hours before the first basic overhaul. Backed by worldwide support and service.

ArcReach®

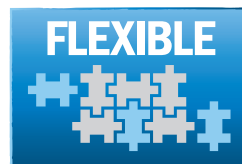**Remote control of the power source without a cord.** See pages 2 and 3.

BUILT TOUGH

Miller

Big Blue® 400 Pro
ArcReach® • DC Welding Generator

ArcReach

USA model shown is

✓ **T4F COMPLIANT**

DURABLE BUILT TO LAST

Built to last in harsh industrial environments

SUPERIOR ARC PERFORMANCE

New standard for productivity and weld quality

WELDS AROUND THE WORLD

International models available
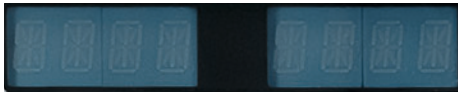
FLEXIBLE

Easy to add capabilities

TRUE BLUE® 3YR. WARRANTY

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

Big Blue® 400 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.

Meters display
• Process settings for quick and easy setup
• Preset and actual amperage

Simple-to-set controls require no elaborate procedure — just select process and weld!

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) reduces the open-circuit voltage to 15 volts when the welding power source is not in use, increasing operator safety without compromising arc starts.

Thermal overload protection prevents machine damage if the duty cycle is exceeded or airflow is blocked.

Standard features include adjustable Hot Start,™ output contactor control, automatic idle and 120-volt block heater.
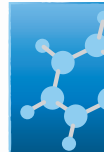
Arc control is beneficial when welding with stick and solid wires for easier fine-tuning of tough-to-weld materials and out-of-position applications.

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

POWERFUL GENERATOR

10,000 watts of pure generator power. Plug in an extra Miller® inverter-based power source for a second welding arc!
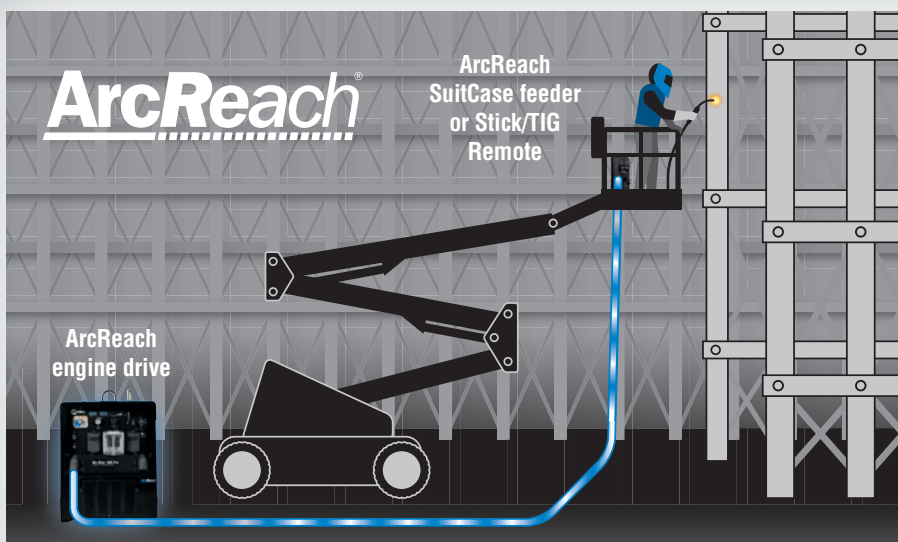
HD POWDER COAT

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

Quiet operation. Improves worksite communication.

ArcReach® Remote Control Technology

ArcReach®

ArcReach SuitCase feeder or Stick/TIG Remote
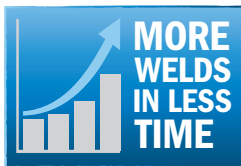
ArcReach engine drive

Remote control of the power source without a cord

An ArcReach system allows you to change weld settings from your SuitCase wire feeder or ArcReach Stick/TIG Remote, saving a trip to the power supply. ArcReach technology uses the existing weld cable to communicate welding control information between the feeder or remote and the power source. This technology eliminates the need for control cords, and their associated problems and costs.

Big Blue® 400 Pro ArcReach® Additional Features

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

MORE WELDS IN LESS TIME
Increased productivity

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 400 Pro — reducing the need to access the power supply.

Automatic return to panel settings. System automatically returns to Big Blue 400 Pro setting when ArcReach communication is terminated. For example, if the Big Blue is set to gouging at 350 amps and an ArcReach feeder is connected, the Big Blue will go to a MIG/FCAW process. If the feeder is disconnected, the Big Blue will go back to its previous setting (gouging at 350 amps).

Less operator fatigue by not needing to move or reposition heavy secondary weld leads bundled with control cords on the jobsite. Control cables are not used.

QA BETTER WELDS WITH LESS REWORK
Improved weld quality

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.
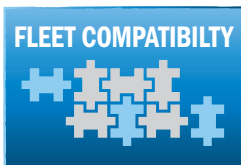
Remote override of Big Blue 400 Pro. When an ArcReach accessory is connected to a Big Blue the accessory has full control and the Big Blue controls are disabled. While under ArcReach control, process and voltage/amperage adjustments are locked out, preventing accidental changes by personnel other than the welding operator.

FEWER CABLES TO MAINTAIN
Reduced maintenance

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.

FLEET COMPATIBILTY
Improved flexibilty

Cross platform compatible. The same ArcReach accessories that work on engine-driven equipment can also be used on select ArcReach-equipped XMT®, Dimension™ and PipeWorx 350 FieldPro™ 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.

Big Blue® 400 Pro ArcReach® System and Accessories

Big Blue 400 Pro ArcReach system (Kubota 907732001 or Mitsubishi 907733001) with SuitCase X-TREME 12VS ArcReach feeder and Bernard S-Gun **(951589)**, ArcReach Stick/TIG Remote **(301325)**, and ArcReach Smart Feeder **(300935)** with Bernard PipeWorx 300 MIG gun **(195400)**.

Note: ArcReach is only available on USA models.

SuitCase X-TREME 8VS/12VS ArcReach feeders for MIG or flux-cored welding
• Remote voltage control
• Polarity indication
• Auto-Process Select™

ArcReach Smart Feeder for advanced wire processes
• RMD and pulsed MIG processes
• Remote voltage control
• Store and recall weld settings

ArcReach Stick/TIG Remote for stick or TIG welding
• Remote amperage control
• Polarity indication
• Arc control for stick
• Auto-Process Select™

Specifications (Subject to change without notice.)

Weld Mode/ Process	Weld Output Range	Weld Output Rated at 100% Duty Cycle at 104°F (40°C)	Max. Open-Circuit Voltage	Generator Power Output Rated at 104°F (40°C)**	Sound Levels at Rated Output, 23 ft. (7 m)	Dimensions	Net Weight (without fuel)***
CC/DC (TIG)	20–400 A	300 A at 32 VDC 350 A at 27 VDC 400 A at 24 VDC	85 VDC 15 VDC*	12,000 watts peak, 10,000 watts continuous 1-phase, 84/42 A, 120/240 VAC, 60 Hz	**Kubota** Idle: 66 dB (91 Lwa) Weld: 71.6 dB (96 Lwa) **Mitsubishi** Idle: 68.7 dB (93 Lwa) Weld: 72.1 dB (97 Lwa) **CAT** Idle: 65 dB (90 Lwa) Weld: 71.2 dB (96 Lwa)	H: 32 in. (813 mm) W: 26.25 in. (667 mm) D: 56 in. (1,422 mm)	**Kubota** 950 lb. (431 kg) **Mitsubishi** 993 lb. (450 kg) **CAT** 1,010 lb. (458 kg)
CC/DC (Stick)	20–400 A						
CV/DC (FCAW/MIG)	14–40 V						

*Sense voltage for stick and Lift-Arc™ TIG.   **Will operate either 60 Hz or 50/60 Hz power tools, lights, etc.   ***Additional 82 lb. (37 kg) when fuel tank is full.

CSR® Certified by Canadian Standards Association to both the Canadian and U.S. Standards. Meets NEMA and IEC output ratings.
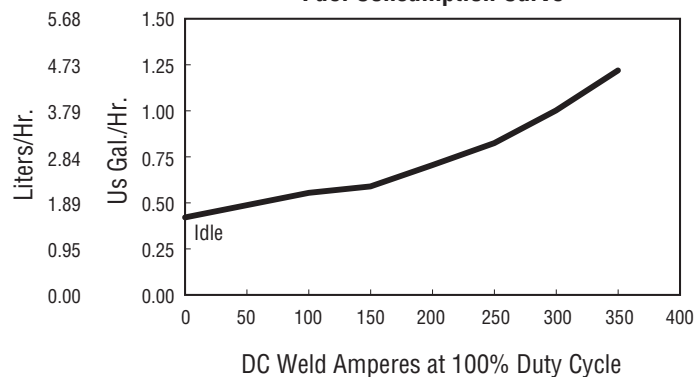
CAT and Kubota powered international models are CE approved.

Engine Specifications (Engines warranted separately by the engine manufacturer.)

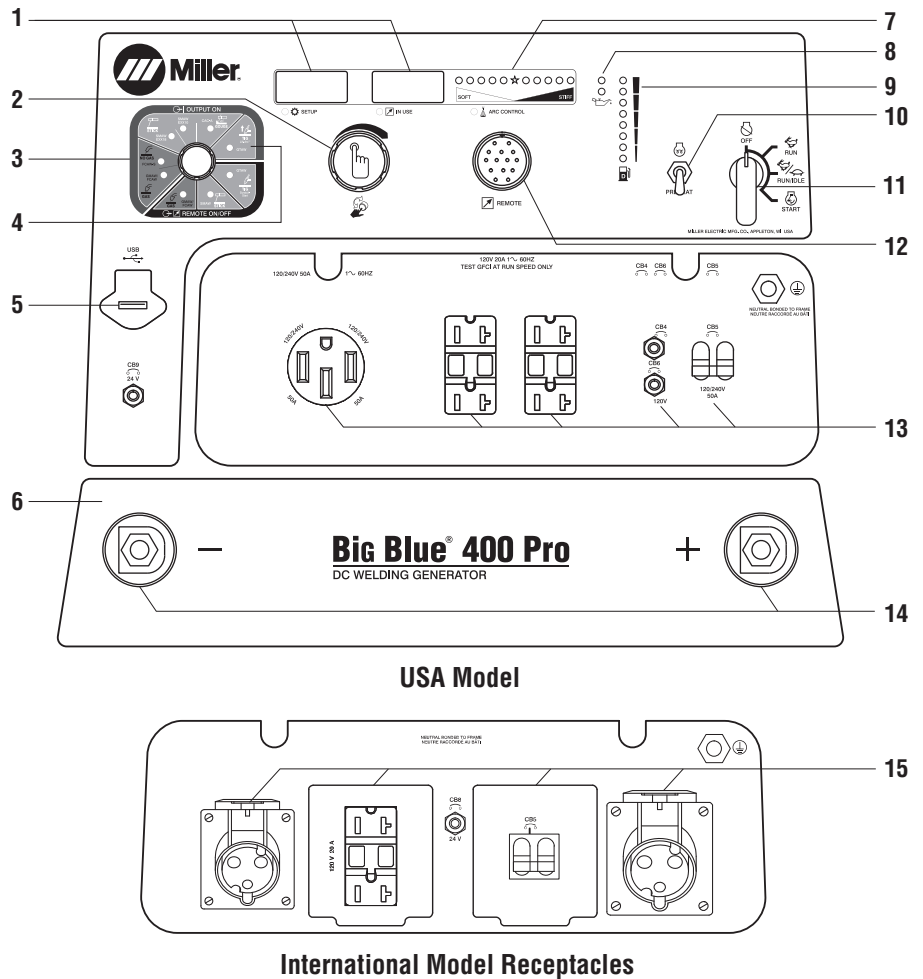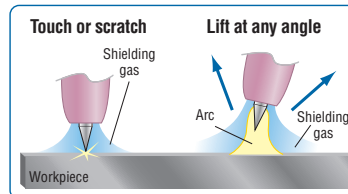|	Engine Brand	Features	HP	Type	Engine Speeds	Capacities	Automatic Engine Shutdown
USA	Mitsubishi S4L2	EPA Tier 4 Final compliant, includes 120 V block heater	24.7	Four-cylinder, liquid-cooled, industrial diesel	Idle: 1,500 rpm Weld: 1,800 rpm	Fuel: 11.5 gal. (43.5 L) Oil: 5.8 qt. (5.5 L) Coolant: 10 qt. (9.5 L)	Low oil pressure, high coolant temperature, low fuel level
USA	Kubota V1505	EPA Tier 4 Final compliant, includes 120 V block heater	20.2	Four-cylinder, liquid-cooled, industrial diesel	Idle: 1,500 rpm Weld: 1,800 rpm	Fuel: 11.5 gal. (43.5 L) Oil: 6 qt. (5.7 L) Coolant: 6 qt. (5.7 L)	Low oil pressure, high coolant temperature, low fuel level
Int'l	CATERPILLAR C1.5	EPA Tier 4i compliant, includes 120 V block heater	21.7	Three-cylinder, liquid-cooled, industrial diesel	Idle: 1,500 rpm Weld: 1,800 rpm	Fuel: 11.5 gal. (43.5 L) Oil: 5.9 qt. (5.6 L) Coolant: 6 qt. (5.7 L)	Low oil pressure, high coolant temperature, low fuel level

Performance Data

Fuel Consumption Curve

Liters/Hr. — Us Gal./Hr.

5.68 — 1.50
4.73 — 1.25
3.79 — 1.00
2.84 — 0.75
1.89 — 0.50
0.95 — 0.25
0.00 — 0.00

Idle

0   50   100   150   200   250   300   350   400

DC Weld Amperes at 100% Duty Cycle

Simultaneous Welding and Power

Weld Amperes	Total Aux. Power Available (Watts)
25 A	10,000
75 A	10,000
125 A	10,000
175 A	9,000
225 A	7,500
300 A	4,500
350 A	1,000

Function Guide

1. **Self-calibrating digital weld meters with fault code indication** display preset or actual weld parameters.

2. **Pushbutton main control knob** used for adjusting amperage/voltage, adjusting arc control, and accessing the service menu.

3. **LED process indicator.** Front panel process selections are illuminated with an LED that identifies the active process. This enables the selected weld process to be seen at a distance from the power source.

4. **Lift-Arc™ TIG with Auto-Stop™ and Auto-Crater™.**

5. **USB port** allows software updates from a USB drive. A summary file of recoded data from the unit will be saved to a USB drive that is inserted.

6. **Weatherproof Lexan® nameplate** is super durable and resists cracking and fading.

7. **Adjustable arc control** adjusts DIG when process control is in stick mode and adjusts inductance when process control is in FCAW or MIG mode. The amount of DIG determines how much amperage (heat) varies with stick arc length. Inductance determines the "wetness" of the weld puddle.

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. **Glow plugs** assist in cold weather starting.

11. **Engine control switch** is used to start the engine and then select between auto idle and high speed lock.

12. **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.

13. **50 A, 120/240 V receptacle and 20 A, 120 V GFCI receptacles with circuit breakers**
    Note: For matching 240 V plug, order **119172**.

14. **Weld output terminals**

15. **International receptacle panel with 16 A, 240 V receptacle, 20 A 120 V GFCI receptacle and 32 A, 240 V receptacle with circuit breakers**
    Note: For matching 240 V, 16 A plug, order **255416** and for matching 240 V, 32 A plug, order **255418**.
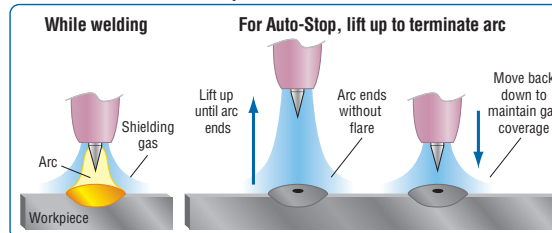
USA Model

Big Blue® 400 Pro
DC WELDING GENERATOR

International Model Receptacles

ARC START *with* Lift-Arc™

Touch or scratch   **Lift at any angle**

Shielding gas

Arc   Shielding gas

Workpiece

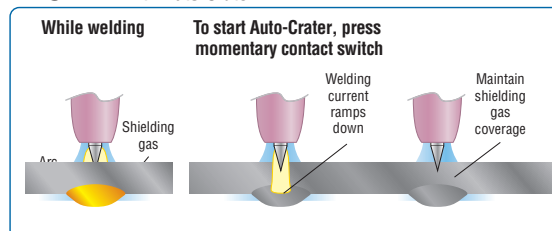- Reduces or eliminates sticking
- Reduces or eliminates electrode/work contamination
- Low open-circuit voltage

ARC END *with* Auto-Stop™

While welding   **For Auto-Stop, lift up to terminate arc**

Arc   Shielding gas

Workpiece

Lift up until arc ends   Arc ends without flare   Move back down to maintain gas coverage

- Eliminates need for a remote control
- Maintains shielding gas coverage
- Eliminates tungsten and workpiece contamination
- Eliminates unwanted arc strikes outside the weld area

ARC END *with* Auto-Crater™

While welding   **To start Auto-Crater, press momentary contact switch**

Arc   Shielding gas

Welding current ramps down   Maintain shielding gas coverage

- Maintains shielding gas coverage
- Eliminates tungsten and workpiece contamination
- Auto-Crater time allows for addition of filler
- Eliminates unwanted arc strikes outside the weld area

Replacement 110 V Receptacle Panel
195356 Field
For International models only. Replaces complete auxiliary power panel with one 110-volt, 16-amp and one 110-volt, 32-amp receptacle and Earth Leakage Circuit Breaker (ELCB) supplementary protector.

Female Receptacle

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
119172 Field
120/240 V, 50 A plug (NEMA 14-50P) to fit full KVA receptacle.

International Plugs Field
255418 1-phase, 240 V, 32 A plug
255416 1-phase, 240 V, 16 A plug

Engine Filter Kits
246987 Field. For CAT
253901 Field. For Kubota
252782 Field. For Mitsubishi
Includes all filters required for proper engine maintenance. Oil filter, primary and secondary fuel filter, and primary air filter.

Spark Arrestor (Muffler) Kit   300585 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.

Protective Cover
195301 Field
Blue water-resistant cover with Miller logo resists stains and mildew, and protects the finish of your welder.

MIG (GMAW) or Flux-cored (FCAW)

SuitCase® X-TREME™ 8VS Wire Feeder
951582
SuitCase® X-TREME™ 12VS Wire Feeder
951543
Lightweight, voltage-sensing wire feeders include secondary contactor, gas valve, drive roll kit and MIG gun. See literature M/6.42.

SuitCase® 12RC Wire Feeder
951580
Lightweight and flexible enough to run a variety of wires up to .062-inch diameter. Includes remote voltage control, drive roll kit and MIG gun. See literature M/6.5.

SuitCase® X-TREME™ 8VS ArcReach®
951588 With Bernard™ S-Gun™
951584 With Bernard™ BTB Gun 300 A
SuitCase® X-TREME™ 12VS ArcReach®
951589 With Bernard™ S-Gun™
951581 With Bernard™ BTB Gun 300 A
Portable feeder designed to run off of arc voltage. When paired with an ArcReach power sources provides remote control of the power source without a cord — saving time and money. See literature M/6.42.

ArcReach® Smart Feeder
300935
For use with ArcReach models only. For MIG, FCAW, and advanced RMD® and pulse processes. See page 3 for more information.

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)**.

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 – M/1.74.

PipeWorx Memory Cards
For use with ArcReach Smart Feeder only.

301230 System Software
For free download, visit MillerWelds.com

300557 Calibration
Used to calibrate the PipeWorx System. For free download, visit MillerWelds.com

300744 Inconel
Pulsed MIG, .045-inch diameter wire, 100% argon

300460 Range Locks
Provides ability to set nominal parameter values and ranges for wire feed processes.

300667 Accu-Power™
Displays instantaneous power during welding to meet the new ASME requirement for calculating heat input on complex waveform processes (RMD® and pulsed MIG).

301035 Trigger Select/Hold Option
Enables trigger select while welding to change processes and parameters without stopping.

AC TIG (GTAW) Welding

The Dynasty 210 power sources can be run off the engine drive's generator to provide two arcs with only one engine.

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

Multiple Operator Welding

The XMT 350 and CST 280 power sources can be run off the engine drive's generator to provide two arcs with only one engine.

XMT® 350 Series
See literature DC/18.93.

CST™ 280
See literature DC/29.55.

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 for improved reception.

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

RMS-14 On/Off Control   187208
Momentary-contact switch for contactor control. Rubber-covered pushbutton dome switch ideal for repetitive on-off applications. Includes 26.5-foot (8 m) cord and 14-pin plug.

RCC-14 Remote Contactor and Current Control 151086
East/west rotary-motion fingertip control attaches to TIG torch using two hook-and-loop fasteners. Includes 26.5-foot (8 m) cord and 14-pin plug.

PRHC-14 Hand Control 195511
Complete current or voltage control brings 120 volts GFCI power to work area in a single cord. Housed in a durable, light aluminum case and includes 125-foot (38 m) cord with plugs.

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.)

HWY-Mid Frame Trailer   301438
1,424-pound (646 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
Provides an area to conveniently wrap weld cables and extension cords.

Dual Hitch   301441
Combination 2-inch (50 mm) ball hitch and 3-inch (76 mm) lunette eye in one reversible assembly.
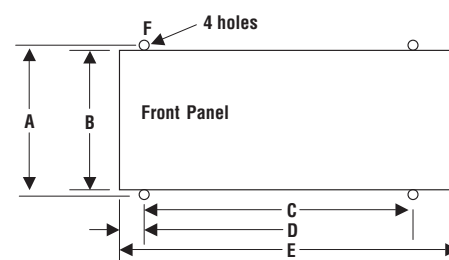
2-In-1 Document/ Fire Extinguisher Holder 301236
Stores documents and holds a 5-pound fire extinguisher.

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

Mounting Specifications

Front Panel

F — 4 holes

A. 27.75 in. (705 mm)
B. 26.25 in. (667 mm)
C. 52.25 in. (1,327 mm)
D. 2 in. (51 mm)
E. 56 in. (1,422 mm)
F. .562 in. (14 mm) dia.

Height: 32 in. (813 mm)
Width: 26.25 in. (667 mm)
Depth: 56 in. (1,422 mm)

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-Mid Frame	1,605 lb. (728 kg)	1,424 lb. (646 kg)	1,424 lb. (646 kg)	19.5 in. (495 mm)	8 in. (203 mm)	46 in. (1,168 mm)	ST175/80D-13 Load Range C	Length: 101 in. (2,565 mm) Width: 55 in. (1,397 mm)*	181 lb. (82 kg)

Width at outside of fenders.