

Big Blue® 400 Pro

**Diesel Engine-Driven
Welder/AC Generator** 

Quick Specs



Heavy Industrial Applications

Mechanical Contractors
Structural Steelwork
Fabrication
Maintenance
Repair
Rental
Construction
Pipe Welding

Processes

Stick (SMAW)
MIG (GMAW)
Flux-Cored (FCAW)
DC TIG (GTAW)
Air Carbon Arc (CAC-A)
Rated: 3/16-inch (4.8 mm) carbons,
Capable: 1/4-inch (6.4 mm) carbons
Air Plasma Cutting and Gouging with
optional Spectrum® models

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**

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.

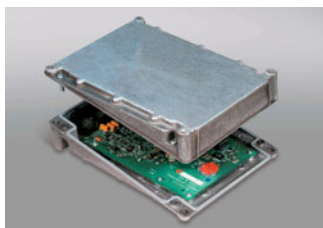
Superior arc performance

- Four preset DIG settings (Stick)
- Hot Start™ (Stick)
- Lift-Arc™ TIG with Auto-Stop™ and Crater-out
- MIG/FCAW arc performance

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

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.

Quiet operation. Improves worksite communication.



The Vault—ultimate control board reliability. See page 4.

BUILT TOUGH



USA model shown is



TRUE BLUE
3YR. WARRANTY

Welder/generator is warranted by Miller for 3 years, parts and labor.
Engine is warranted separately by engine manufacturer.

Kubota

Kubota V1505 four-cylinder diesel.

**MITSUBISHI ENGINE
NORTH AMERICA, INC.**

Mitsubishi S4L2 four-cylinder diesel.



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.

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.

Auto Remote Sense™ (ARS) detects if a remote control is plugged into the 14-pin receptacle and eliminates confusion of a remote/panel switch.

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

Standard features include digital preset weld meters, output contactor control, automatic idle and 120 V block heater.



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

Equipment Sales US and Canada
Phone: 866-931-9730
FAX: 800-637-2315
International Phone: 920-735-4554
International FAX: 920-735-4125

MillerWelds.com



Specifications (Subject to change without notice.)



Weld Mode/ Process	Weld Output Range	Weld Output Rated 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	Weight (without fuel)**
CC/DC (TIG)	20–400 A	300 A at 32 VDC, 100% duty cycle 350 A at 27 VDC, 100% duty cycle 400 A at 24 VDC, 100% duty cycle	85 VDC	12,000 watts peak, 10,000 watts continuous 1-phase, 84/42 A, 120/240 VAC, 60 Hz	Kubota 71.6 dB (96 Lwa) Mitsubishi 72.1 dB (97 Lwa) CAT 71.2 dB (96 Lwa)	H: 32 in. (813 mm) W: 26.25 in. (667 mm) D: 56 in. (1422 mm)	Kubota Net: 950 lb. (431 kg) Ship: 1000 lb. (454 kg) Mitsubishi Net: 993 lb. (450 kg) Ship: 1043 lb. (473 kg) CAT Net: 1010 lb. (458 kg) Ship: 1060 lb. (481 kg)
CC/DC (Stick)	20–400 A						
CV/DC (FCAW/MIG)	14–40 V						

*Will operate either 60 Hz or 50/60 Hz power tools, lights, etc. **Additional 82 lb. (37 kg) when fuel tank is full.

Certified by Canadian Standards Association to both the Canadian and U.S. Standards. Meets NEMA and IEC output ratings.

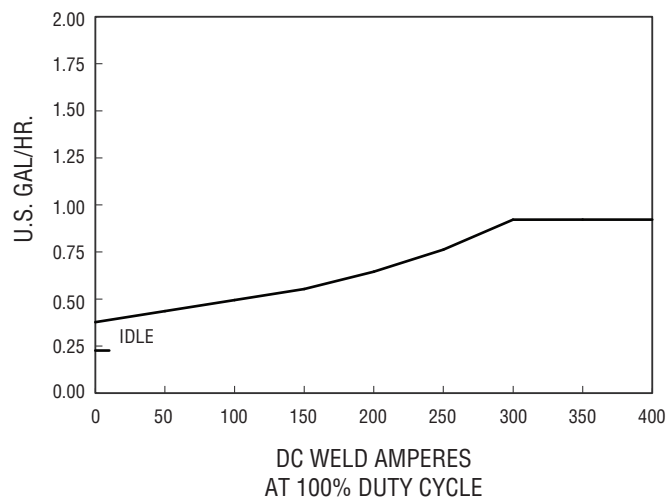
CAT and Kubota powered international models are approved.

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

Engine Brand	Features	HP	Type	Engine Speeds	Capacities	Automatic Engine Shutdown
USA	Mitsubishi S4L2	24.7	Four-cylinder, liquid-cooled, industrial diesel	Idle: 1500 RPM Weld: 1800 RPM	11.5 gal. (43.5 L) 6.3 qt. (6 L) 10 qt. (9.5 L)	Low oil pressure, high coolant temperature, low fuel level
	Kubota V1505	20.2	Four-cylinder, liquid-cooled, industrial diesel	Idle: 1500 RPM Weld: 1800 RPM	11.5 gal. (43.5 L) 6 qt. (5.7 L) 6 qt. (5.7 L)	Low oil pressure, high coolant temperature, low fuel level
Int'l	CATERPILLAR C1.5	21.7	Three-cylinder, liquid-cooled, industrial diesel	Idle: 1500 RPM Weld: 1800 RPM	11.5 gal. (43.5 L) 6 qt. (5.7 L) 6 qt. (5.7 L)	Low oil pressure, high coolant temperature, low fuel level

Performance Data

FUEL CONSUMPTION CURVE



SIMULTANEOUS WELDING AND POWER

Weld Amperes	Total Power Available (Watts)	120 V	240 V
225	3000	25	12.5
175	5000	41.6	20.8
125	5900	49.2	24.6
75	7300	60.8	30.4
25	10,000	83.5	41.7

Function Guide

- 1. Self-Calibrating Digital Weld Meters with Fault Code Indication** display preset or actual weld parameters.
- 2. Four Preset DIG Settings** offer the best arc characteristics for different electrodes and joint designs. The amount of DIG determines how much amperage (heat) varies with Stick arc length. The combined process switch along with preset DIG settings make the Big Blue® 400 Pro easy to set without the complication of multiple switches.
- 3. Hot Start™** provides positive Stick electrode starts for easy starts on all electrodes types and it also works great for bead tie-ins.
- 4. Great MIG/FCAW Performance and Arc Starts.** Easy to run all wires from .023-inch solid wires to large diameter 5/64-inch flux-cored wires.

5. Lift-Arc™ TIG with Auto-Stop™ and Crater-out

- 6. 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.
- 7. Weatherproof Lexan® Nameplate** is super durable and resists cracking and fading. Color coded for ease of operation.

- 8. Meter Maintenance Displays** show fuel level, engine hours, oil change interval and hi temp/low pressure/low fuel shutdown information.
Low Fuel Shutdown shuts engine off prior to running out of fuel to prevent loss of fuel in the system, and make restarts easy. Display will read noFUEL. Turn the machine off, add fuel, and restart.

- 9. Glow Plugs** assist in cold weather starting.

- 10. Engine Control Switch** is used to start the engine and then select between Auto Idle and High Speed Lock.

- 11. Amperage/Voltage Adjust Control**

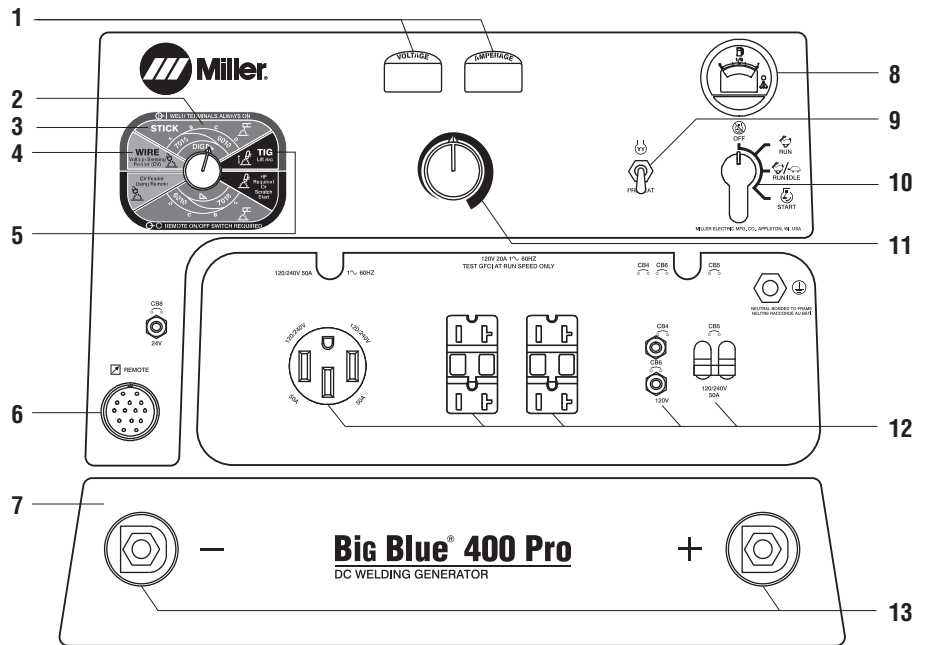
- 12. 240 VAC Receptacle and 120 VAC GFCI Receptacles with Circuit Breakers**

Note: For matching 240 V plug, order #119 172.

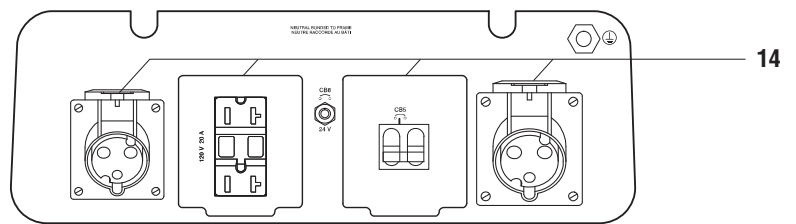
- 13. Weld Output Terminals**

- 14. International Receptacle Panel with 16 A, 240 VAC Receptacle, 120 VAC GFCI Receptacle and 32 A, 240 VAC Receptacle with Circuit Breakers**

Note: For matching 240 V, 16 A plug, order #255 416 and for matching 240 V, 32 A plug, order #255 418.

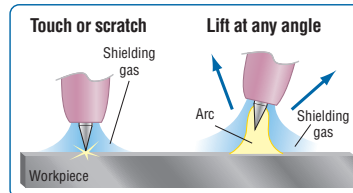


USA Model



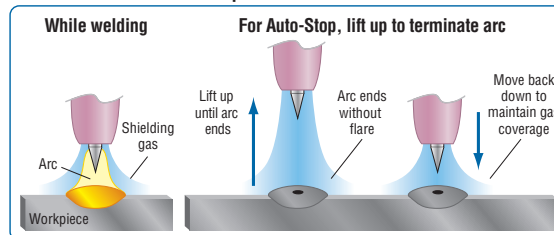
International Model Receptacles

ARC START with Lift-Arc™



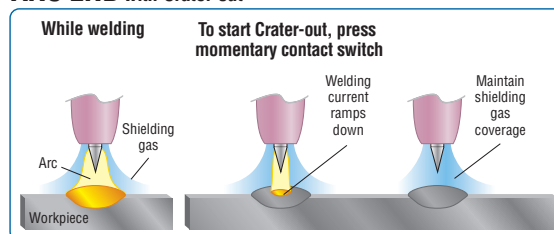
- Reduces or eliminates sticking
- Reduces or eliminates electrode/work contamination
- Low open-circuit voltage

ARC END with Auto-Stop™



- 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 Crater-out

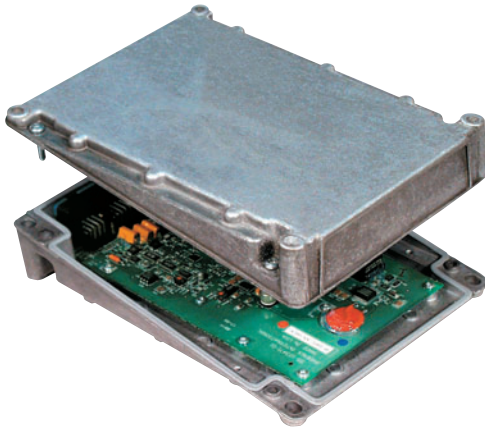


- Maintains shielding gas coverage
- Eliminates tungsten and workpiece contamination
- Crater-out time allows for addition of filler
- Eliminates unwanted arc strikes outside the weld area

What Makes Miller® Industrial Engine Drives So **[TOUGH]**?

Superior Circuit Board Design

Our critical circuit boards are engineered to carry *low power* and *low heat* to reduce thermal stress and minimize expansion and contraction. In contrast, our competitor's boards carry *high power* and *high heat*, making them more vulnerable to failure.



“The Vault” Makes Upgrading to Miller CC/CV Units Worry-Free

Concerns with circuit board reliability have resulted in some operators steering clear of CC/CV welder/generators—even though they offer a superior arc and multiple welding processes. Miller circuit board reliability isn't a concern since all Big Blue multiprocess industrial engine drives feature the Vault.

Created out of two aluminum halves sealed with silicone, as well as watertight harness connections, the Vault provides a clean circuit board environment, protecting the electronics—and controlling output—in heavy industrial applications. No other competitor protects their electronics with a sealed vault, leaving critical circuit boards exposed to harsh elements that can disrupt the machine's electronics, and therefore, its operation.

Rigorous Testing for Tough, Real-World Conditions

To prove our machines go to the limit, Miller industrial engine drives are put to the test in very extreme environmental conditions.

- **Airborne dust and sand.**

Critical components are exposed to abusive airborne particles in a special testing chamber for weeks, helping make sure they'll operate while facing extreme levels of dirt, dust or sand on the jobsite.

- **Humidity and corrosion.**

Inside our Houston testing room, critical components are subjected to extended moisture and corrosive salt exposure to ensure they'll run even when exposed to humid climates, corrosive coastal environments, and driving rain.

- **Temperature extremes.** Miller industrial engine drives are tested to ensure performance in scorching heat. All Miller engine-driven machines are weld rated at 104 degrees Fahrenheit, but actual tests are conducted up to 122 degrees Fahrenheit to assure peak performance.

- **Jobsite/over-the-road abuse.** Miller industrial engine drives are shaken for hours on transportation bed simulators, subjected to severe vibration, and test-dropped and jerked to ensure they'll withstand the stresses that can shut down competitive machines.

- **Continuous operation.** Miller industrial engine drives run day and night, in all weather conditions, to assure they'll perform without interruption in the field.



Why Industrial Engine Drive Customers Choose Miller

The ultimate test of Miller reliability is how it performs in the field. These pictures provide a glimpse of how Miller industrial engine drives perform for our customers. Read the full stories, and many others demonstrating our superior reliability, at MillerWelds.com.



Genuine Miller® Accessories

Engine Filter Kits

#246 987 Field. For CAT

#253 901 Field. For Kubota

#252 782 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 #300 585 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 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 #043 947

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



Protective Cover

#195 301 Field
Blue water-resistant cover with Miller logo resists stains and mildew, and protects the finish of your welder.

Chalwyn Safety Valve

#300 576 Field. For Mitsubishi

Shuts off air flow to the engine to prevent over-speed condition. Required on many petroleum jobsites, this valve provides both manual and automatic operation giving you two methods of operation to meet jobsite compliance standards.



Full KVA Plug Kit

#119 172 Field
120/240 VAC, 50 A plug (NEMA 14-50P) to fit full KVA receptacle.



Female Receptacle



Full KVA Adapter Cord #300 517 Field
NEMA 14-50P to NEMA 6-50R. Adapts engine drive 120/240 V plug to common Millermatic® and Spectrum® 240 V plug.



International Plugs

#255 418 1-Phase, 240 VAC, 32 A plug
#255 416 1-Phase, 240 VAC, 16 A plug

Replacement 110 V Receptacle Panel

#195 356 Field

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.

Stick (SMAW) Welding

Weld Leads

2/0 Stick Cable Set, 50 ft. (15 m) #173 851
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) #043 952

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.

MIG (GMAW) or Flux-Cored (FCAW)



SuitCase® X-TREME™ 8VS Wire Feeder

#951 582

SuitCase® X-TREME™ 12VS Wire Feeder

#951 543

Lightweight, voltage-sensing wire feeders include secondary contactor, gas valve and drive roll kit. See Lit. Index No. M/6.42.



SuitCase® 12RC Wire Feeder

#951 580
Lightweight and flexible enough to run a variety of wires up to .062-inch diameter. Includes remote voltage control and drive roll kit. See Lit. Index No. M/6.5.

MIG (GMAW)/Flux-Cored (FCAW) Guns

Miller produces a complete line of dependable MIG guns. See Lit. Index Nos. AY/15.0, AY/16.0 and AY/17.0.



Spoolmatic® 30A Spool Gun #130 831

Air-cooled, 200-amp, one-pound spool gun for aluminum MIG. See Lit. Index No. M/1.73. Requires **WC-24 Control (#137 549)**.

XR™ Wire Feeders and Guns

Push-pull system designed to handle difficult-to-feed soft alloy wires such as aluminum. See Lit. Index No. M/1.7, M/1.71, and M/1.73.

TIG (GTAW) Welding



Dynasty® 200 Series #907 099, #907 099-01-1

For premium portable AC/DC TIG arc quality. See Lit. Index No. AD/4.8.



HF-251 Series #042 388

HF-251D-1, 115 VAC
High-frequency arc starter and stabilizer. See Accessory Lit. Index No. AY/5.0.

Multiple Operator Welding

The XMT 350, CST 280 and Dynasty 200 power sources can be run off the machine's generator to provide two arcs with only one engine. There is no arc interaction under 180 amps.



XMT® 350 Series

#907 161, #907 224, #907 366

See Lit. Index No. DC/18.83 and DC/18.84.



CST™ 280

#907 244, #907 244-01-1 #907 251, #907 251-01-1
See Lit. Index No. DC/29.55.

Plasma Cutting



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

Spectrum® 375 X-TREME™ #907 529

See Lit. Index No. PC/9.2.

Spectrum® 625 X-TREME™ #907 579

See Lit. Index No. PC/9.6.

Spectrum® 875 #907 583

See Lit. Index No. PC/9.8.

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

Genuine Miller® Accessories (Continued)

Remote Controls



Wireless Remote Foot Control #300 429
For remote current, voltage and contactor control. Receiver plugs directly into the 14-pin receptacle of Miller machine. 90-foot (27.4 m) operating range.



Wireless Remote Hand Control #300 430
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 #300 749
Optional where improved reception is desired.

RFCS-14 HD Foot Control #194 744
Heavy-duty foot control for remote current, voltage and contactor control. Includes 20-foot (6 m) cord and 14-pin plug.

RHC-14 Hand Control #242 211 020
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.



RMS-14 On/Off Control #187 208
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 #151 086
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 #195 511
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 Cords for 14-Pin Remote Controls or 24 VAC Wire Feeders

- #242 208 025 25 ft. (7.6 m)
- #242 208 050 50 ft. (15.2 m)
- #242 208 080 80 ft. (24.4 m)

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



HWY-224 Trailer #043 805 For highway use.

OFR-224 Trailer #043 802 For off-road use.

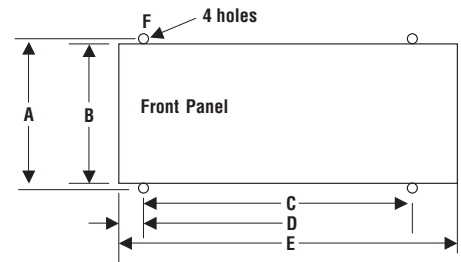
A 2650-pound (1202 kg) capacity trailer. Welded steel tubing frame, heavy-duty axle with roller bearing hubs and leaf-spring suspension. Includes jack stand and 2-inch (50 mm) ball hitch. *HWY-224 also includes fenders and lights.*

Cable Tree #043 826
Provides an area to conveniently wrap weld cables and extension cords.



Dual Hitch #300 831
2-inch (50 mm) ball hitch and 3-inch (76 mm) lunette eye in one reversible assembly.

Mounting Specifications



- A. 27.75 in. (705 mm)
- B. 26.25 in. (667 mm)
- C. 52 in. (1321 mm)
- D. 2 in. (51 mm)
- E. 56 in. (1422 mm)
- F. .562 in. (14 mm) dia.

Height: 32 in. (813 mm)
Width: 26.25 in. (667 mm)
Depth: 56 in. (1422 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-224 OFR-224	3500 lb. (1588 kg)	2960 lb. (1343 kg)	2650 lb. (1202 kg)	18.5 in. (470 mm)	7.25 in. (184 mm)	52 in. (1321 mm)	B78-13	Length: 105 in. (2667 mm) Width: HWY-59.5 in. (1511 mm)* OFR-58.438 in. (1484 mm)	320 lb. (145 kg)

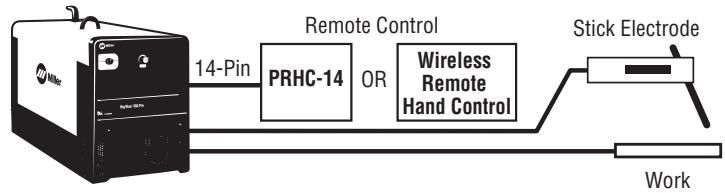
* Width at outside of fenders.

Typical Installations

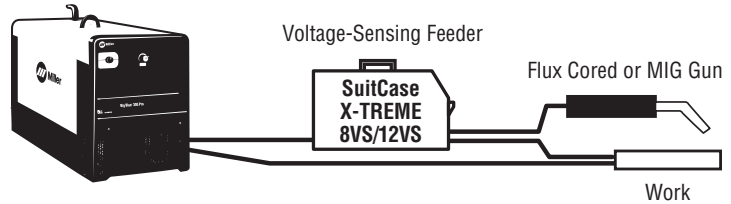
Electrode Hot



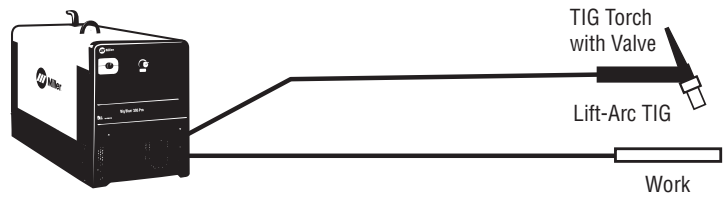
Stick (SMAW) Basic Equipment
 PRHC-14 #195 511
 Wireless Remote Hand Control #300 430
 Wireless Antenna Kit #300 749



Flux-Cored/MIG (FC) Basic Equipment
 SuitCase® X-TREME™ 8VS #951 582
 SuitCase® X-TREME™ 12VS #951 543



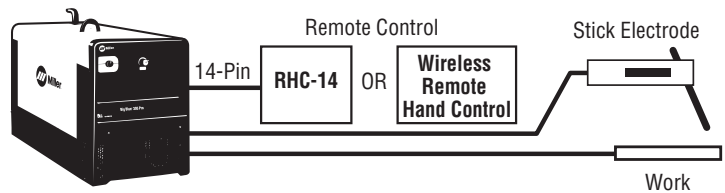
Lift-Arc™ TIG (GTAW) Basic Equipment



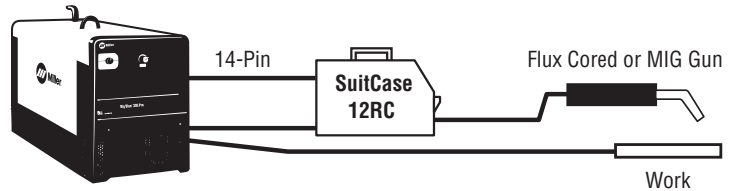
Remote On/Off Required



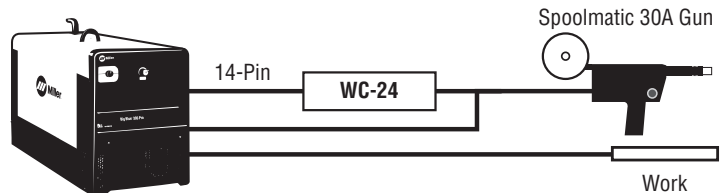
Stick (SMAW) Basic Equipment
 RHC-14 #242 211 020
 Wireless Remote Hand Control #300 430
 Wireless Antenna Kit #300 749



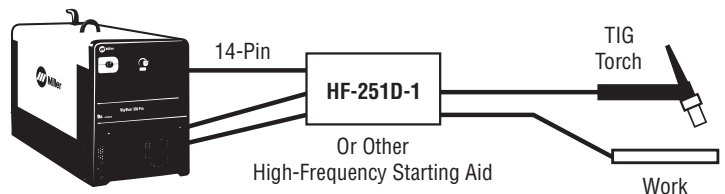
Flux-Cored/MIG (FC) Basic Equipment
 SuitCase® 12RC #951 580



Aluminum MIG (GMAW) Basic Equipment
 Spoolmatic® 30A #130 831
 WC-24 #137 549



TIG (GTAW) Basic Equipment
 HF-251D-1 #042 388*
 Dynasty® 200 SD #907 099
 Dynasty® 200 DX #907 099-01-1
 *TIG power cable adapter required



Ordering Information

Equipment and Options	Stock No.	Description	Qty.	Price
Big Blue® 400 Pro	#907 605	Mitsubishi. USA model		
	#907 606	Kubota. USA model		
Big Blue® 400X Pro	#907 630	CAT (CE). International model		
	#907 631	Kubota (CE). International model		
Field Accessories				
Engine Filter Kit	#246 987 #253 901 #252 782	Field. For CAT, includes air, oil and fuel filters Field. For Kubota, includes air, oil and fuel filters Field. For Mitsubishi, includes air, oil and fuel filters		
Spark Arrestor (Muffler) Kit	#300 585	Field		
FA-1D Lockable Flame Arrestor Fuel Cap	#043 947	Field		
Protective Cover	#195 301	Field		
Chalwyn Safety Valve	#300 576	Field. For Mitsubishi		
Full KVA Plug Kit	#119 172	120/240 V. Field		
Full KVA Adapter Cord	#300 517	Field		
International Plugs		Field. See page 5		
Replacement 110 V Receptacle Panel	#195 356	Field. 110 V, 16/32 A with ELCB		
Stick Welding Leads				
		See page 5		
MIG/Flux-Cored Welding				
SuitCase® X-TREME™ 8VS	#951 582	See Lit. Index No. M/6.41		
SuitCase® X-TREME™ 12VS	#951 543	See Lit. Index No. M/6.42		
SuitCase® 12RC	#951 580	See Lit. Index No. M/6.5		
MIG (GMAW) and Flux-Cored (FCAW) Guns		See Lit. Index Nos. AY/15.0, AY/16.0 and AY/17.0		
Spoolmatic® 30A Spool Gun	#130 831	Requires WC-24 Control. See Lit. Index No. M/1.73		
WC-24 Control	#137 549	See Lit. Index No. M/1.5		
XR™ Wire Feeder Control and Guns		See Lit. Index No. M/1.7, M/1.71, and M/1.73		
TIG Welding				
Dynasty® 200 SD	#907 099	Basic controls for AC/DC TIG/Stick, 120–460 VAC. See Lit. Index No. AD/4.8		
Dynasty® 200 DX	#907 099 011	Full feature controls for AC/DC TIG/Stick, 120–460 VAC. See Lit. Index No. AD/4.8		
HF-251D-1	#042 388	115 VAC. See Lit. Index No. AY/5.0		
Multiple Operator Welding				
XMT® 350 Series	#907 161 #907 224 #907 366	CC/CV model w/Dinse-style connectors. See Lit. Index No. DC/18.83 VS model w/Tweco®-style connectors. See Lit. Index No. DC/18.83 MPa model w/Dinse-style connectors. See Lit. Index No. DC/18.84		
CST™ 280 CC/DC	#907 244 #907 244 011 #907 251 #907 251 011	220-230/460–575 VAC w/Dinse-style connectors. See Lit. Index No. DC/29.55 220-230/460–575 VAC w/Tweco®-style connectors. See Lit. Index No. DC/29.55 208-230/400–460 VAC w/Dinse-style connectors. See Lit. Index No. DC/29.55 208-230/400–460 VAC w/Tweco®-style connectors. See Lit. Index No. DC/29.55		
Plasma Cutting				
Spectrum® 375 X-TREME™	#907 529	Includes X-CASE™. See Lit. Index No. PC/9.2		
Spectrum® 625 X-TREME™	#907 579	Includes X-CASE™. See Lit. Index No. PC/9.6		
Spectrum® 875	#907 583	See Lit. Index No. PC/9.8		
Remote Controls and Switches				
		See page 6		
Trailers and Hitches				
HWY-224 Trailer	#043 805	Trailer with lights, fenders and 2-inch (50 mm) ball hitch. For highway use		
OFR-224 Trailer	#043 802	Trailer with 2-inch (50 mm) ball hitch. For off-road use		
Cable Tree	#043 826	Trailer-mounted cable holder for HWY-224 or OFR-224		
Dual Hitch	#300 831	Combination 2-inch (50 mm) ball hitch and 3-inch (76 mm) lunette eye in one reversible assembly. For HWY-224 or OFR-224		

Date:

Total Quoted Price:

Distributed by:

