**The Big Blue® 400 X CC/CV**

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

<table>
<thead>
<tr>
<th>Heavy Industrial Applications</th>
<th>Processes</th>
<th>Output Range</th>
<th>Generator Output Rated at 40˚C (104˚F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipe Welding</td>
<td>Stick (SMAW)</td>
<td>DC Stick 20 – 410 A</td>
<td>12,000 Watts Peak, 10,000 Watts Continuous</td>
</tr>
<tr>
<td>Structural</td>
<td>Flux-Cored (FCAW)</td>
<td>DC TIG 20 – 410 A</td>
<td></td>
</tr>
<tr>
<td>General Fabrication</td>
<td>Lift-Arc DC TIG (GTAW)</td>
<td>FCAW 14 – 40 V</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Air Carbon Arc (CAC-A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>thru 6.4-mm (1/4 in.) carbons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Quick Specs**

- **Heavy Industrial Applications**
  - Pipe Welding
  - Structural
  - General Fabrication

- **Processes**
  - Stick (SMAW)
  - Flux-Cored (FCAW)
  - Lift-Arc DC TIG (GTAW)
  - Air Carbon Arc (CAC-A)
  - thru 6.4-mm (1/4 in.) carbons

- **Output Range**
  - DC Stick 20 – 410 A
  - DC TIG 20 – 410 A
  - FCAW 14 – 40 V

**The Power of Blue®**

- The Big Blue 400 X is ideal for pipeline contractors, rental or fleet managers who value reliability, ease of service, and long life at an economical price.

- **Superior arc performance**
  - Preset DIG settings (Stick)
  - Hot Start™ (Stick)
  - Lift-Arc TIG with Auto-Stop™ and Crater-out
  - FCAW arc performance

- **Tailored arc control (DIG)** allows the arc characteristics to be changed for specific applications and electrodes. Smooth running 7018 or stiffer, more penetrating 6010 electrodes.

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

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

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

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

- **CAT**
  - Caterpillar C1.5 three-cylinder diesel.

- **EPA Tier 4i Compliant**

- Heavy-duty low-speed industrial 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.

- **Quiet operation.** Improves jobsite communication and safety.

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

- **High efficiency.** Three-phase, rotating-field welding generator requires less fuel and horsepower to operate.

- **IEC and NEMA compliant for welders.** Degree of protection by enclosure IP23.

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

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

<table>
<thead>
<tr>
<th>Weld Mode</th>
<th>Weld Output Range</th>
<th>Weld Output Rated at 40° C (104° F)</th>
<th>Max. Open-Circuit Voltage</th>
<th>Generator Power Output Rated at 40° C (104° F)</th>
<th>Sound Levels at Rated Output, 7 m (23 ft.)</th>
<th>Dimensions</th>
<th>Weight (without fuel)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC/DC</td>
<td>20 – 410 A</td>
<td>400 A, 20 VDC, 30% Duty Cycle</td>
<td>65</td>
<td>Peak: 12,000 watts</td>
<td>71.2 dB (96 Lwa)</td>
<td>H: 813 mm (32 in.) W: 667 mm (26.25 in.) D: 1422 mm (56 in.)</td>
<td>Net: 499 kg (1100 lb.) Ship: 522 kg (1150 lb.)</td>
</tr>
<tr>
<td>CV/DC</td>
<td>14 – 40 V</td>
<td>300 A, 32 VDC, 60% Duty Cycle</td>
<td></td>
<td>Continuous: 10,000 watts, 1-phase, 91/46 A, 120/240 VAC, 50/60 Hz</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Additional 43 kg (95 lb.) when fuel tank is full.

### Engine Specifications

**Engine Brand**
- Caterpillar C1.5

**Features**
- EPA Tier 4i compliant, indirect-injected, liquid-cooled engine. Right-side service access with intervals of 250 hours for oil and filters.

**HP**
- 21.7

**Type**
- 3-cylinder, industrial, liquid-cooled, diesel

**Engine Speeds**
- Weld: 1850 RPM

**Fuel**
- 43.5 L (11.5 gal.)

**Coolant**
- 5.7 L (6 qt.)

**Engine Shutdown**
- Low Oil Pressure, High Coolant Temperature, Low Fuel Level

### Performance Data

**STICK/TIG MODE V/A CURVE – MAX DIG**

**GENERATOR POWER CURVE**

**FUEL CONSUMPTION CURVE**

**SIMULTANEOUS WELDING AND POWER**

<table>
<thead>
<tr>
<th>Weld Amperes</th>
<th>Total Power Available (Watts)</th>
<th>120 V</th>
<th>240 V</th>
</tr>
</thead>
<tbody>
<tr>
<td>225</td>
<td>3000</td>
<td>25</td>
<td>12.5</td>
</tr>
<tr>
<td>175</td>
<td>5000</td>
<td>41.6</td>
<td>20.8</td>
</tr>
<tr>
<td>125</td>
<td>5900</td>
<td>49.2</td>
<td>24.6</td>
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<tr>
<td>75</td>
<td>7300</td>
<td>80.8</td>
<td>30.4</td>
</tr>
<tr>
<td>25</td>
<td>10,000</td>
<td>83.5</td>
<td>41.7</td>
</tr>
</tbody>
</table>
1. Optional Self-Calibrating Digital Weld Meters with Fault Code Indication (order #195 289) display preset or actual weld parameters.

2. Eight 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 X easy to set without the complication of multiple switches. 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.

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

4. Great FCAW Performance and Arc Starts. Makes it easy to run all flux-cored wires up to 2 mm (5/64 in.) in diameter.


6. Weatherproof Lexan® Nameplate is super durable and resists cracking and fading. Color coding is for ease of operation.

7. 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.

8. Glow Plugs assist in cold weather starting.

9. Engine Control Switch is used to start and stop the engine.

10. Amperage/Voltage Adjust Control

11. 240 VAC Receptacles with Earth Leakage Circuit Breakers

12. Weld Output Terminals

ARC START with Lift-Arc™

Touch or scratch

Lift at any angle

• 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

• 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

While welding

To start Crater-out, press momentary contact switch

• 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
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 40 degrees Celsius, but actual tests are conducted up to 50 degrees Celsius 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. The quote on the left provide a glimpse of how Miller industrial engine drives perform for customers. Read the full stories, and many others demonstrating our superior reliability, at MillerWelds.com.

“The Big Blue 300 Pro® worked year ‘round and never caused any problems. We were amazed at the cold-weather starting. A machine that doesn’t run means we have to work overtime… secondly, you don’t want to have a crew standing around at $200 an hour while someone tries to start the machine.”
Edward McNaughton, Nordcap Steel Docks

*Big Blue 400 X is similar to Big Blue 300 Pro.
Genuine Miller® Accessories

**International Plugs**
- #255 416 Field
  - 1-Phase, 240 VAC, 16 A plug
- #255 418 Field
  - 1-Phase, 240 VAC, 32 A plug

**Cold Weather Starting Kit** #195 056 Field
- 120 V block heater.
  - Note: All models come standard with preheaters (glow plugs).

**Engine Filter Kit** #246 987 Field
- Includes all filters required for proper engine maintenance. Oil filter, primary and secondary fuel filter, and primary air filter.

**Spark Arrestor (Muffler) Kit** #195 291 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 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** #195 301 Field
- Blue water-resistant cover with Miller logo resists stains and mildew, and protects the finish of your welder.

**Stick (SMAW) Welding**
- **No. 2 Stick Cable Set, 4.6 m (15 ft.)** #195 196
  - Consists of 4.6-m (15 ft.) No. 2 electrode cable with holder, and 4.6-m (15 ft.) work cable with clamp. 200 A, 100% duty cycle.
- **No. 2 Stick Cable Set, 15 m (50 ft.)** #300 636
  - Consists of 15-m (50 ft.) No. 2 electrode cable with holder, and 15-m (50 ft.) work cable with clamp. 200 A, 100% duty cycle.

**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.

**MIG (GMAW) or Flux-Cored (FCAW)**
- **Millermatic® Passport® Plus** #907 401
  - Portable, all-in-one MIG package features ultimate arc performance, self-contained gas bottle, and flexibility to plug into 115 or 230 V power with Miller multi-voltage plug (MVP™). See Lit. Index No. DC/12.53.

**TIG (GTAW) Welding**
- **HF-251 Series** #042 388
  - HF-251D-1, 115 VAC
  - High-frequency arc starter and stabilizer. See Accessory Lit. Index No. AY/5.0.

**Plasma Cutting**
- **Spectrum 375 X-TREME™** #907 529
  - See Lit. Index No. PC/9.2.
- **Spectrum 625 X-TREME™** #907 531
  - See Lit. Index No. PC/9.6.
- **Spectrum 875** #907 390-01-1
  - 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. 27.4-m (90 ft.) operating range. Requires Wireless Antenna Kit #300 749.

Wireless Remote Hand Control  #300 430
For remote current, voltage and contactor control. Receiver plugs directly into the 14-pin receptacle of Miller machine. 91.4-m (300 ft.) operating range. Requires Wireless Antenna Kit #300 749.

Wireless Antenna Kit  #300 749
Required for Pro Series engine drives. Optional on other compatible Miller products where improved reception is desired.

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

RHC-14 Hand Control  #242 211 020
Miniature hand control for remote current, voltage and contactor control. Dimensions: 102 x 102 x 82 mm (4 x 4 x 3.25 in.). Includes 6-m (20 ft.) 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 8-m (26.5 ft.) cord and 14-pin plug.

RCC-14 Remote Contactor and Current Control  #151 086
Side-to-side rotary-motion fingertip control fastens to TIG torch using two Velcro® straps. Includes 8-m (26.5 ft.) cord and 14-pin plug.

Extension Cables for 14-Pin Remote Controls or 24 VAC Wire Feeders
#242 208 025 7.6 m (25 ft.)
#242 208 050 15.2 m (50 ft.)
#242 208 080 24.4 m (80 ft.)

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>HWY-224</td>
<td>1588 kg (3500 lb.)</td>
<td>1343 kg (2960 lb.)</td>
<td>1202 kg</td>
<td>470 mm (18.5 in.)</td>
<td>191 mm (7.5 in.)</td>
<td>1321 mm (52 in.)</td>
<td>878-13</td>
<td></td>
<td>145 kg (320 lb.)</td>
</tr>
<tr>
<td>OFR-224</td>
<td>1343 kg (2960 lb.)</td>
<td>1202 kg (2650 lb.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Width at outside of fenders.
Typical Installations

**Stick (SMAW) Basic Equipment**

![Diagram](image)

**Flux-Cored (FCAW) Basic Equipment**

![Diagram](image)

**TIG (GTAW) Basic Equipment**

![Diagram](image)

**Plasma Basic Equipment**

![Diagram](image)

- **Stick Electrode**
- **Work**
- **Flux-Cored Gun**
- **Work**
- **TIG Torch**
- **Work**
- **Cutting Torch**
- **Work**

---

**Stick (SMAW) Basic Equipment**

**Flux-Cored (FCAW) Basic Equipment**

**TIG (GTAW) Basic Equipment**

**Plasma Basic Equipment**

- **SuitCase® X-TREME® 8VS #300 656**
- **SuitCase® X-TREME® 12VS #300 659**
- **Dynasty® 200 Series HF-251D-1 #042 388**
- **Spectrum® 375 X-TREME® #907 529**
- **Spectrum® 625 X-TREME® #907 531**
- **Spectrum® 875 #907 390-01-1**

* *TIG power cable adapter required*
# Ordering Information

## Equipment and Options

<table>
<thead>
<tr>
<th>Stock No.</th>
<th>Description</th>
<th>Qty.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>#907 143</td>
<td>Caterpillar Engine with 240 V Receptacle Package</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#907 143-00-1</td>
<td>Caterpillar Engine with 240 V Receptacle Package and Weld Meters</td>
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</tbody>
</table>

### Field Accessories

<table>
<thead>
<tr>
<th>Stock No.</th>
<th>Description</th>
<th>Qty.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>#195 289</td>
<td>Digital Weld Meter Kit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#255 416</td>
<td>International Plugs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#255 418</td>
<td>Cold Weather Starting Kit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#195 056</td>
<td>Engine Filter Kit</td>
<td></td>
<td></td>
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<tr>
<td>#246 987</td>
<td>Spark Arrestor (Muffler) Kit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#043 947</td>
<td>Protective Cover</td>
<td></td>
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</tr>
<tr>
<td>#195 301</td>
<td>Field</td>
<td></td>
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</table>

### Stick Welding Leads

<table>
<thead>
<tr>
<th>Stock No.</th>
<th>Description</th>
<th>Qty.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>#042 388</td>
<td>See page 5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### MIG/Flux-Cored Welding

<table>
<thead>
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<th>Stock No.</th>
<th>Description</th>
<th>Qty.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>#907 401</td>
<td>Includes gas bottle and MVP. See Lit. Index No. DC/12.53</td>
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<tr>
<td>#907 161</td>
<td>XMT® 350 Series</td>
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<tr>
<td>#907 224</td>
<td>XMT® 350 Series</td>
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<tr>
<td>#907 366</td>
<td>XMT® 350 Series</td>
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<tr>
<td>#907 244</td>
<td>CST™ 280 CC/DC</td>
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<td>#907 244-01-1</td>
<td>CST™ 280 CC/DC</td>
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<tr>
<td>#907 251</td>
<td>CST™ 280 CC/DC</td>
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<tr>
<td>#907 251-01-1</td>
<td>CST™ 280 CC/DC</td>
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<tr>
<td>#907 099</td>
<td>Dynasty® 200 SD</td>
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<tr>
<td>#907 099-01-1</td>
<td>Dynasty® 200 DX</td>
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### TIG Welding

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<tbody>
<tr>
<td>#042 388</td>
<td>HF-251 Series</td>
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### Multiple Operator Welding

<table>
<thead>
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<th>Description</th>
<th>Qty.</th>
<th>Price</th>
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<tbody>
<tr>
<td>#907 529</td>
<td>Spectrum® 375 X-TREME™</td>
<td></td>
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</tr>
<tr>
<td>#907 531</td>
<td>Spectrum® 625 X-TREME™</td>
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<tr>
<td>#907 875</td>
<td>Spectrum® 875</td>
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### Plasma Cutting

<table>
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<tr>
<th>Stock No.</th>
<th>Description</th>
<th>Qty.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>#043 805</td>
<td>Trailer with lights, fenders and 50-mm (2 in.) ball hitch. For highway use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#043 802</td>
<td>Trailer with 50-mm (2 in.) ball hitch. For off-road use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#043 826</td>
<td>Trailer-mounted cable holder for HWY-224 or OFR-224</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#300 831</td>
<td>Combination 50-mm (2 in.) ball hitch and 76-mm (3 in.) lunette eye in one</td>
<td></td>
<td></td>
</tr>
</tbody>
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## Remote Controls

<table>
<thead>
<tr>
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<th>Description</th>
<th>Qty.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>#195 301</td>
<td>Field</td>
<td></td>
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</table>

## Date:

**Total Quoted Price:**

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Distributed by:

---

Litho in USA