Big Blue® 350 PipePro

Processes

<table>
<thead>
<tr>
<th>Heavy Industrial Applications</th>
<th>Processes</th>
<th>Output Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipe welding</td>
<td>Stick (SMAW)</td>
<td>DC stick 20–400 A</td>
</tr>
<tr>
<td>Mechanical contractor</td>
<td>MIG (GMAW)</td>
<td>FCAW/MIG 14–40 V</td>
</tr>
<tr>
<td></td>
<td>Flux-cored (FCAW)</td>
<td>DC TIG 20–400 A</td>
</tr>
<tr>
<td></td>
<td>RMD®*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pulsed MIG (GMAW-P)*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DC TIG (GTAW)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Air carbon arc (CAC-A)</td>
<td>Rated: 1/4-inch (6.4 mm) carbons</td>
</tr>
</tbody>
</table>

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

Accu-Rated—Not Inflated Generator Power

Big Blue 350 PipePro

Designed exclusively for transmission pipeline work, the Big Blue 350 PipePro offers stick as well as MIG/flux-cored welding capabilities to meet high-strength steel requirements and is ideal for the most demanding pipeline jobs.

NEW! Big Blue® 350 PipePro SF

Improve productivity and quality with advanced RMD® and pulsed MIG processes with the FieldPro Smart Feeder.

The vault — ultimate control board reliability. See page 5.

Superior arc performance

- Adjustable arc control
- Adaptive Hot Start™ (stick)
- FCAW/MIG arc performance
- Lift-Arc™ TIG with Auto-Stop™

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

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.

Output Range

- DC stick 20–400 A
- FCAW/MIG 14–40 V
- DC TIG 20–400 A

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

Accu-Rated—Not Inflated Generator Power

Big Blue 350 PipePro SF

- Mitsubishi S4L2 four-cylinder diesel engine
- Backed by worldwide support and service
- Designed for transmission pipeline work
- Stick and MIG/flux-cored welding capabilities

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

Miller Electric Mfg. Co.
An ITW Welding 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
Models Overview

Base model

- **Simple-to-set controls** require no elaborate procedure — just select process and weld!
- **Infinite arc control** allows the arc characteristics to be changed for specific applications in stick and MIG.
- **HD powder coat** with zinc-rich primer protects sheet metal from rust and corrosion.

**LINE-X® cover** is workbench tough and provides superior impact, corrosion and abrasion protection.

**Engine coolant temperature gauge and 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

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

NEW! SF model additional features

Advanced RMD® and pulsed MIG processes are now available in an engine driven welder/generator. Discover increased productivity, quality, and improved efficiency in field welding with the new Big Blue 350 PipePro SF with FieldPro™ Smart Feeder.

FieldPro Smart Feeder

FieldPro Smart Feeder delivers excellent RMD® and pulsed MIG welding up to 200 feet away from the power source with no control cables — twice the distance previously possible. RMD and pulsed MIG processes help reduce weld failures and eliminate backing gas on some stainless and chrome-moly pipe-welding applications.

- **Durable design reduces downtime.** Impact-resistant case and the elimination of feeder control cables provide a solid solution to last in harsh environments.
- **Full remote control at the weld joint.** Simply connect standard weld cables in-line with the FieldPro Smart Feeder and you’re ready to go!

**Simple-to-set controls** have integrated support for Smart Feeder, simply turn the knob to either MIG VS or FCAW VS for optimal performance.

**Stainless steel appearance package** provides additional exterior protection to withstand corrosive environments.

Big Blue 350 PipePro SF (907428002) shown with FieldPro Smart Feeder (300935) and Bernard™ PipeWorx 300 MIG gun (195400). Items sold separately.
## Specifications (Subject to change without notice.)

<table>
<thead>
<tr>
<th>Weld Mode/Process</th>
<th>Weld Output Range</th>
<th>Weld Output Rated at 100% Duty Cycle at 104°F (40°C)</th>
<th>Max. Open-Circuit Voltage</th>
<th>Generator Power Output Rated at 104°F (40°C)</th>
<th>Sound Levels at Rated Output, 23 ft. (7 m)</th>
<th>Dimensions</th>
<th>Weight (without fuel)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC/DC (TIG)</td>
<td>20–400 A</td>
<td>300 A at 32 VDC 350 A at 27 VDC 400 A at 24 VDC</td>
<td>85 VDC 15 VDC*</td>
<td>12,000 watts peak, 10,000 watts continuous 1-phase, 84/42 A, 120/240 VAC, 60 Hz</td>
<td>Idle: 68.7 dB (93 Lwa) Weld: 72.1 dB (97 Lwa)</td>
<td>H: 32 in. (813 mm) W: 26.25 in. (667 mm) D: 56 in. (1,422 mm)</td>
<td>Net: 1,018 lb. (462 kg) Ship: 1,068 lb. (484 kg)</td>
</tr>
<tr>
<td>CC/DC (Stick)</td>
<td>20–400 A</td>
<td>20–400 A</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>CV/DC (FCAW/MIG)</td>
<td>14–40 V</td>
<td>14–40 V</td>
<td></td>
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</tr>
</tbody>
</table>

*Sense voltage for stick and Lift-Arc™ TIG. **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.

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

<table>
<thead>
<tr>
<th>Engine Brand</th>
<th>Features</th>
<th>HP</th>
<th>Type</th>
<th>Engine Speeds</th>
<th>Capacities</th>
<th>Automatic Engine Shutdown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitsubishi S4L2</td>
<td>EPA Tier 4 Final compliant</td>
<td>24.7</td>
<td>Four-cylinder, liquid-cooled industrial diesel</td>
<td>Weld: 1,800 rpm Idle: 1,500 rpm</td>
<td>Fuel: 11.5 gal. (43.5 L) Oil: 5.8 qt. (5.5 L) Coolant: 10 qt. (9.5 L)</td>
<td>Low oil pressure, high coolant temperature, low fuel level</td>
</tr>
</tbody>
</table>

## Performance Data

### Fuel Consumption Curve

<table>
<thead>
<tr>
<th>DC Weld Amperes at 100% Duty Cycle</th>
<th>Fuel Consumption Curve</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>5.68</td>
</tr>
<tr>
<td>0.25</td>
<td>4.73</td>
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<tr>
<td>0.50</td>
<td>3.79</td>
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<tr>
<td>0.75</td>
<td>2.84</td>
</tr>
<tr>
<td>1.00</td>
<td>1.98</td>
</tr>
<tr>
<td>1.25</td>
<td>1.19</td>
</tr>
<tr>
<td>1.50</td>
<td>0.79</td>
</tr>
<tr>
<td>1.75</td>
<td>0.49</td>
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<tr>
<td>2.00</td>
<td>0.29</td>
</tr>
<tr>
<td>2.25</td>
<td>0.19</td>
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</table>

<table>
<thead>
<tr>
<th>Simultaneous Welding And Power</th>
<th>Weld Amperes</th>
<th>Total Aux. Power Available (Watts)</th>
<th>120 V</th>
<th>240 V</th>
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</thead>
<tbody>
<tr>
<td>25 A</td>
<td>10,000</td>
<td>83.3</td>
<td>41.6</td>
<td></td>
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<tr>
<td>75 A</td>
<td>10,000</td>
<td>83.3</td>
<td>41.6</td>
<td></td>
</tr>
<tr>
<td>125 A</td>
<td>10,000</td>
<td>83.3</td>
<td>41.6</td>
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<tr>
<td>175 A</td>
<td>9,000</td>
<td>75</td>
<td>37.5</td>
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</tr>
<tr>
<td>225 A</td>
<td>7,500</td>
<td>62.5</td>
<td>31.3</td>
<td></td>
</tr>
<tr>
<td>300 A</td>
<td>4,500</td>
<td>37.5</td>
<td>18.8</td>
<td></td>
</tr>
<tr>
<td>350 A</td>
<td>1,000</td>
<td>8.3</td>
<td>4.2</td>
<td></td>
</tr>
</tbody>
</table>
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. Color coded for ease of operation.

3. 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.

4. Smart Feeder setting (SF model only). Recommended for optimal Smart Feeder operation.

5. Great FCAW/MIG performance and arc starts make the Big Blue™ 350 PipePro arc the best in its class. Easy to run all wires from .023-inch solid wires to large-diameter 5/64-inch flux-cored wires.

6. Lift-Arc™ TIG with Auto-Stop™

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.


10. Meter maintenance display shows fuel level, engine hours, oil change interval and high temp/low pressure/low fuel shutdown information.

11. Glow plugs assist in cold weather starting.

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

13. Amperage/voltage adjust control

14. Weld output terminals
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. The quote on the left provides a glimpse of how Miller industrial engine drives perform for customers. Read the full story, and many others demonstrating our superior reliability, at MillerWelds.com.

“The Miller 350 PipePro makes my job easier every day. It runs a 3/16 electrode downhill smoother and keeps it lit better than any machine I’ve used.”

Jerry Morley, Gas Field Specialists Inc, Plumbers and Steamfitters #267
Genuine Miller® Accessories

**MIG (GMAW) or Flux-Cored (FCAW)**

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.

Engine Filter Kits 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 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.

PipeWorx Memory Cards
For use with FieldPro 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.

**TIG (GTAW) Welding**

FieldPro™ Smart Feeder 300935
For use with Big Blue 350 PipePro SF model only. See page 2 for more information.

Dynasty® 210 Series 907685, 907686
For premium portable AC/DC TIG arc quality. See literature AD/4.81.

HF-251D-1 042388
115 V. High-frequency arc starter and stabilizer. See accessory literature AV/5.0.
Plasma Cutting

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).

Remote Controls

Wireless Remote 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. Requires Wireless Antenna Kit 300749.

Wireless Antenna Kit 300749
Required on other compatible Miller products where improved reception is desired.

Cable Tree 043826
Provides an area to conveniently wrap weld cables and extension cords.

Dual Hitch 300831
2-inch (50 mm) ball hitch and 3-inch (76 mm) lunette eye in one reversible assembly.

PRHC-14 Hand Control 195511
Complete current or voltage control brings 120 V GFCI power to work area in a single cord. Housed in durable 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)

Wireless Antenna Kit 300749
Required for Pro Series engine drives. Optional on other compatible Miller products where improved reception is desired.

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

HWY-224 Trailer 043805
A 2,650-pound (1,202 kg) capacity trailer for highway use. Welded steel tubing frame, heavy-duty axle with roller bearing hubs and leaf-spring suspension. Includes jack stand, 2-inch (50 mm) ball hitch, fenders and lights.

Cable Tree 043826
Provides an area to conveniently wrap weld cables and extension cords.

Dual Hitch 300831
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. 52.25 in. (1,327 mm)
D. 2 in. (51 mm)
E. 56 in. (1,422 mm)
F. .562 in. (14 mm) diameter
Height: 32 in. (813 mm)
Width: 26.25 in. (667 mm)
Depth: 56 in. (1,422 mm)

Genuine Miller® Accessories (Continued)

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>3,500 lb. (1,588 kg)</td>
<td>2,960 lb. (1,343 kg)</td>
<td>2,650 lb. (1,202 kg)</td>
<td>18.5 in. (470 mm)</td>
<td>7.25 in. (184 mm)</td>
<td>52 in. (1,321 mm)</td>
<td>B78-13</td>
<td>Length: 105 in. (2,667 mm)</td>
<td>Width: 59.5 in. (1,511 mm)*</td>
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</tbody>
</table>

*Width at outside of fenders.
<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>Big Blue® 350 PipePro®</td>
<td>907428</td>
<td>Base model with Mitsubishi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Big Blue® 350 PipePro® SF</td>
<td>907428002</td>
<td>Smart Feeder compatible model with Mitsubishi and stainless steel package</td>
<td></td>
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<tr>
<td><strong>Field Accessories</strong></td>
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<tr>
<td>Full KVA Adapter Cord</td>
<td>300517</td>
<td>See page 6</td>
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<tr>
<td>Full KVA Plug Kit</td>
<td>119172</td>
<td>1-phase, 120/240 V, 50 A</td>
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<tr>
<td>Engine Filter Kit</td>
<td>252782</td>
<td>For Mitsubishi. Includes air, oil and fuel filters</td>
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<tr>
<td>Spark Arrestor (Muffler) Kit</td>
<td>300585</td>
<td>See page 6</td>
<td></td>
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<tr>
<td>FA-1D Lockable Flame Arrestor Fuel Cap</td>
<td>043947</td>
<td>See page 6</td>
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<tr>
<td>Protective Cover</td>
<td>195301</td>
<td>See page 6</td>
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<tr>
<td><strong>MIG/Flux-Cored Welding</strong></td>
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<tr>
<td>SuitCase® X-TREME™ 8VS</td>
<td>951583</td>
<td>With Bernard BTB Gun 300 A. See literature M/6.42</td>
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<tr>
<td>SuitCase® X-TREME™ 12VS</td>
<td>951544</td>
<td>With Bernard Dura-Flux gun. See literature M/6.42</td>
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<tr>
<td>SuitCase® 12RC</td>
<td>951188</td>
<td>With Bernard BTB Gun 300 A. See literature M/6.5</td>
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<tr>
<td>FieldPro™ Smart Feeder</td>
<td>300935</td>
<td>See literature PWS/6.0</td>
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<tr>
<td>Bernard™ PipeWorx 300 MIG Gun</td>
<td>195400</td>
<td>See literature PWS/6.0</td>
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<tr>
<td><strong>TIG Welding</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynasty® 210</td>
<td>907685</td>
<td>Basic controls for AC/DC TIG/stick, 120–480 V. See literature AD/4.81</td>
<td></td>
<td></td>
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<tr>
<td>Dynasty® 210 DX</td>
<td>907686</td>
<td>Full feature controls for AC/DC TIG/stick, 120–480 V. See literature AD/4.81</td>
<td></td>
<td></td>
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<tr>
<td>HF-251D-1</td>
<td>042388</td>
<td>115 V. See literature AY/5.0</td>
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<tr>
<td><strong>Plasma Cutting</strong></td>
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<tr>
<td>Spectrum® 375 X-TREME™</td>
<td>907529</td>
<td>Includes X-CASE™. See literature PC/9.2</td>
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<tr>
<td>Spectrum® 625 X-TREME™</td>
<td>907579</td>
<td>Includes X-CASE™. See literature PC/9.6</td>
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<tr>
<td>Spectrum® 875</td>
<td>907583</td>
<td>See literature PC/9.8</td>
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<tr>
<td><strong>Remote Controls</strong></td>
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<tr>
<td></td>
<td></td>
<td>See page 7</td>
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<td></td>
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<tr>
<td><strong>Trailers and Hitches</strong></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>HWY-224 Trailer</td>
<td>043805</td>
<td>Trailer with lights, fenders and 2-inch (50 mm) ball hitch. For highway use</td>
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</tr>
<tr>
<td>Cable Tree</td>
<td>043826</td>
<td>Trailer-mounted cable holder for HWY-224</td>
<td></td>
<td></td>
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<tr>
<td>Dual Hitch</td>
<td>300831</td>
<td>Combination 2-inch (50 mm) ball hitch and 3-inch (76 mm) lunette eye in one reversible assembly for HWY-224</td>
<td></td>
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</tr>
</tbody>
</table>

**Date:**

**Total Quoted Price:**