### Quick Specs

- **Light Industrial Applications:**
  - Light Fabrication
  - Maintenance and Repair
  - Auto Body
  - Farm/Home

- **Processes:**
  - MIG (GMAW)
  - Flux-Cored (FCAW)

- **Weld Thickness:**
  - 24 ga.–3/16 in. steel and 18–14 ga. aluminum

- **Input Power:** 120 V, 20 A, 60 Hz, single-phase

- **Rated Output:**
  - 90 A at 18.5 VDC, 20% Duty Cycle
  - 40 A at 16 VDC, 100% Duty Cycle, CSA

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#### Uses common household power

- **Weld capacity**
  - **MAX**
    - 3/16” (4.8 mm)
  - **MIN**
    - 24 ga. (0.8 mm)

#### Quick and easy setup

- **Auto-Set™** automatically provides the right settings to weld mild steel while **infinite voltage control** allows the flexibility to manually set your own parameters.
  - Set the wire diameter, a blue light shows Auto-Set is activated
  - Dial in the thickness of what you’re welding
  - Start welding with the exact parameters you need!

- **Angled cast-aluminum drive system** with calibrated tension knob creates consistent feeding and easy setup for up to 15-foot MIG guns.

- **Quick Select™ drive roll** makes setup quicker by offering three grooves — two for different size solid wire and a third for flux-cored wire.

- **Auto Spoolgun Detect™** automatically detects when a MIG gun or spool gun is connected eliminating the need for a switch.

- **Smooth-Start™** provides a smooth, spatter-free start. It’s the best-starting machine in the small MIG machine category.

- **Thermal overload protection** shuts down unit and activates the over temperature light if airflow is blocked or duty cycle is exceeded. Automatically resets when unit cools.

- **Uses 4- or 8-inch (102 or 203 mm) spools** and can be set up to weld with .024–.030 inch (0.6–0.8 mm) solid wire and .030–.035 inch (0.8–0.9 mm) flux-cored wire.

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**Welder is warranted for 3 years, parts and labor.**

**Original main power rectifier parts are warranted for 5 years.**

**Gun warranted for 90 days, parts only.**
**Operation Modes**

**Auto-Set™ Mode**

Auto-Set eliminates guesswork and saves you time on setup. Turn wire speed control fully clockwise to select Auto-Set mode, and set the wire diameter to either .024 or .030 in. The Auto-Set light indicates mode is activated. Then select material thickness using the Auto-Set control.

Use Auto-Set when you want the speed, convenience and confidence of pre-set controls. Auto-Set automatically sets your welder to the proper parameters. It’s available for welding 24-gauge through 3/16-inch mild steel, and only works with .024 and .030 solid wires and C25 shielding gas (75% Argon, 25% CO2).

**Manual Mode**

When welding outside of Auto-Set’s capabilities, or if you prefer custom parameters, use manual mode. The parameter chart on the inside of the access door is an easy-to-use guide for determining your voltage and wire feed speed settings. Reference the white areas on the controls when welding in manual mode.

**Specifications** *(Subject to change without notice.)*

<table>
<thead>
<tr>
<th>Amperage Range</th>
<th>Rated Output</th>
<th>Amps Input at Rated Output, 60 Hz</th>
<th>Wire Feed Speed</th>
<th>Wire Type and Diameter</th>
<th>Max. Open-Circuit Voltage</th>
<th>Dimensions</th>
<th>Net Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 – 140 A</td>
<td>90 A at 18.5 VDC, 20% Duty Cycle</td>
<td>20 3.0 2.45</td>
<td>15 – 360 IPM (0.4 – 9.1 m/min.)</td>
<td>Solid: .024 – .030 in. (0.6 – 0.8 mm)</td>
<td>30</td>
<td>H: 12.5 in. (318 mm)</td>
<td>51 lb. (23.1 kg)</td>
</tr>
<tr>
<td></td>
<td>40 A at 16 VDC, 100% Duty Cycle, CSA</td>
<td>15 1.7 1.0</td>
<td></td>
<td>Stainless: .024 – .030 in. (0.6 – 0.8 mm)</td>
<td></td>
<td>W: 11.25 in. (286 mm)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Flux-Cored: .030 – 0.35 in. (0.8 – 0.9 mm)</td>
<td></td>
<td>D: 20.5 in. (521 mm)</td>
<td></td>
</tr>
</tbody>
</table>

Certified by Canadian Standards Association to both the Canadian and U.S. Standards.

**Control Panel**

1. Over Temperature Light
2. Auto-Set Light
3. Wire Speed/Wire Diameter Control
4. Voltage/Material Thickness Control
5. Plastic Hub with Retaining Ring for 8-inch Spools (shaft also accepts 4-inch spools)
6. Calibrated Tension Knob
7. T-Knob (secures torch)
8. Drive Roll
9. Trigger Control Connector
10. Polarity Changeover Terminals

*Note: Power switch and gas solenoid are on machine back panel.*

**Performance Data**

**DUTY CYCLE CHART**

**VOLT/AMP CURVES**
### Genuine Miller® Accessories

**Spoolmate™ 100 Spool Gun**

- **#300 371**
  - Direct-connect spool gun for Multimatic 200 and all Millermatic 140, 141, 180, 190, and 211 models. Handles .030–.035 inch (0.8–0.9 mm) aluminum (4043 only) and .023–.035 inch (0.6–0.9 mm) steel/stainless steel wires. Rated at 135 amps, 30 percent duty cycle. Includes 12-foot (3.7 m) cable assembly and custom carrying case.

**Replacement/Optional MIG Gun**

- **M-100 (Standard)**
  - **#248 282** 10 ft. (3 m)
- **M-150 (Optional)**
  - **#249 040** 12 ft. (3.7 m)
  - **#249 041** 15 ft. (4.5 m)

All ship with liner #194 011.

**Running Gear/Cylinder Rack**

- **#301 239**
  - Heavy-duty construction with 8-inch rubber rear wheels. Convenient front handles, cable holders and plastic consumable box. For gas cylinders no greater than 7 inches (178 mm) in diameter or 65 pounds (29.5 kg) in weight.

*Purchase the Millermatic 141 package (#951 601) and receive the Millermatic 141 and Running Gear/Cylinder Rack (#301 239) packaged together!*

### Consumables (Order from Miller Service Parts.)

#### For M-100/M-150 Gun

**Contact Tips**

- **#087 299** .024 in. (0.6 mm)
- **#000 067** .030 in. (0.8 mm)
- **#000 068** .035 in. (0.9 mm)
- **#000 069** .045 in. (1.2 mm)

**Contact Tip Adapter**

- **#169 716**

**Replacement Liners**

- **#194 010**
- **#194 011** .030–.035 in. (standard)
- **#194 012** .035–.045 in.

15-foot length — trim to size needed.

**Nozzle**

- **#169 715**
  - 1/2-inch (13 mm) diameter orifice.
  - Nozzle flush with contact tip (standard).

**Gasless Flux-Cored Nozzle**

- **#226 190**

For use with self-shielding flux-cored wires. Improves visibility, eases access in tight corners, protects tip adapter/gas diffuser from spatter and from shorting to the workpiece. For use with the M-100 gun.

#### For Spoolmate™ 100 Spool Gun

**Contact Tips**

- **#199 730** For .024-inch (0.6 mm) wire.
- **#186 419** For .030-inch (0.8 mm) wire.
- **#186 406** For .035-inch (0.9 mm) wire.

**Drive Rolls**

- **Quick Select™ #261 157**
  - For .024-inch (0.6 mm) or .030/.035-inch (0.8/0.9 mm) solid wire, and .030/.035-inch (0.8/0.9 mm) flux-cored wire.

- **Dual Groove, V-Knurled #202 926**
  - For .030/.035-inch (0.8/0.9 mm) or .045-inch (1.2 mm) flux-cored wire.

**Nozzle**

- **#186 405**

**Drive Roll (1)**

- **#186 413** For .030/.035-inch (0.8/0.9 mm) wire.

**Push Roll (1)**

- **#186 414** For .030/.035-inch (0.8/0.9 mm) wire.

**M-Series Gun Consumable Kits**

- **#234 607** .024 in. (0.6 mm)
- **#234 608** .030 in. (0.8 mm)
- **#234 609** .035 in. (0.9 mm)

Each kit contains ten contact tips, one nozzle, and one contact tip adapter.
### Power Source and Options

<table>
<thead>
<tr>
<th>Power Source and Options</th>
<th>Stock No.</th>
<th>Description</th>
<th>Qty.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Millermatic® 141</td>
<td>#907 612</td>
<td>120 V, 60 Hz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Millermatic® 141 with Running Gear/Cyl Rack</td>
<td>#951 601</td>
<td>Power source packaged with #301 239 Running Gear/Cylinder Rack</td>
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<td></td>
</tr>
</tbody>
</table>

### Guns

<table>
<thead>
<tr>
<th>Guns</th>
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<tbody>
<tr>
<td>Spoolmate™ 100 Spool Gun</td>
<td>#300 371</td>
<td>12 ft. (3.7 m). Includes custom carrying case</td>
<td></td>
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</tr>
<tr>
<td>M-100 Gun (Standard)</td>
<td>#248 282</td>
<td>10 ft. (3 m), .030 – .035 in. (0.8 – 0.9 mm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M-150 Gun (Optional)</td>
<td>#249 040</td>
<td>12 ft. (3.7 m), .030 – .035 in. (0.8 – 0.9 mm)</td>
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<tr>
<td></td>
<td>#249 041</td>
<td>15 ft. (4.5 m), .030 – .035 in. (0.8 – 0.9 mm)</td>
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</tr>
</tbody>
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### Accessories

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<tr>
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<tr>
<td>Protective Cover</td>
<td>#301 262</td>
<td></td>
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<tr>
<td>Running Gear/Cylinder Rack</td>
<td>#301 239</td>
<td></td>
</tr>
<tr>
<td>Material Thickness Gauge</td>
<td>#229 895</td>
<td></td>
</tr>
<tr>
<td>Flux-Cored Wire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solid Wire</td>
<td></td>
<td></td>
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<tr>
<td>Shielding Gas Cylinder</td>
<td></td>
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<tr>
<td>Helmet/Gloves/Scratch Brush</td>
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### Available Through Miller Service Parts

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<tr>
<td>Argon and AR/CO₂ Mix Flow Gauge Regulator</td>
<td>#268 546</td>
<td>Replacement standard regulator</td>
</tr>
<tr>
<td>CO₂ Flow Gauge Regulator</td>
<td>#212 492</td>
<td>Required if using 100 percent CO₂ gas</td>
</tr>
<tr>
<td>Contact Tips</td>
<td></td>
<td>See page 3</td>
</tr>
<tr>
<td>Contact Tip Adapter</td>
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</tr>
<tr>
<td>Nozzles</td>
<td></td>
<td>See page 3</td>
</tr>
<tr>
<td>Gasless Flux-Cored Nozzle</td>
<td>#226 190</td>
<td></td>
</tr>
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<td>Drive Rolls</td>
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<td>See page 3</td>
</tr>
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<td>M-Series Gun Consumable Kits</td>
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