SSW Series Spot Welders

Quick Specs

Applications
- Sheet Metal Work
- Light Fabrication
- Maintenance Work

Process
- Resistance Spot Welding

Work Capacity
- 20 kVA units
  - Weld total thicknesses up to 1/4 in (6.3 mm).
  - Not recommended for aluminum or copper alloys.

Rated Output
- 20 kVA at 40% duty cycle depending on model, based on 10-second time period

Weight
- SSW 170–185 lb (77–84 kg) Depending on model

The Power of Blue.

SSW models are designed for stationary use and come with an all-steel pedestal which houses timers and controls.

SSW models come complete with:
- Stationary welding head
- Remote foot switch
- Pedestal inclusive of controls and timer
- Air filter/regulator assembly
- Order tongs/tips separately to match your applications

Set-up/weld switch permits user to use both hands to position weldment between tongs. Can be held longer if longer hold time is desired.

All spot welders operate on single-phase input power, and require an air supply of 60 PSI (414 kPa) minimum.

Adjustable tong pressure nuts to adjust tong pressure for different thicknesses and applications.

Power switch/power "on" light/circuit breaker protects control circuitry. Easy reset.

Cam-operated locking device simplifies installation and adjustment of bottom tong.

Ten-step current control adjusts output current with no change in duty cycle.

Specifications

<table>
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<tr>
<th>Model</th>
<th>Input 50/60 Hz</th>
<th>Work Capacity*</th>
<th>Rated Output**</th>
<th>Rated Output (Calibrated w/ standard-type tongs)</th>
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<th>Dimensions H x W x D</th>
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<td>230 VAC 90 Amps</td>
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*Combined thickness uncoated mild steel using 6 in (152 mm) tongs.
**Duty Cycle based on 10-second time period. (40% duty cycle means unit can weld for 4 second out of each 10-second time period.)

SSW foot switch permits user to use both hands to position weldment between tongs. Can be held longer if longer hold time is desired.

LED display makes it easy to read and see timer settings.

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Specifications (Subject to change without notice.)

SSW Series Spot Welders

Water-Cooled Resistance Spot Welders

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Control Panel

1. Power “On” Light/Circuit Breaker/Switch
2. Fuse to Protect Control Transformer
3. Weld Amperage Control
4. LED Display
5. Set-Up/Weld Switch
   Place rocker switch in Set-Up position to check tong pressure and alignment without making weld.
   Place in Weld position when ready to activate actual squeeze and weld time.

Genuine Miller Accessories

Tip Dresser #040 228
For use with pointed tips.

Water Coolant Systems

For more information, see the Miller Coolant Systems literature sheet, Index No. AY/7.2.

Coolmate™ 3
#043 007 115 VAC
#043 008 230 VAC
For use with water-cooled torches rated up to 600 amps. Unique paddle-wheel indicator, external filter and easy-fill spout.

Coolmate™ V3  #043 009 115 VAC
For use with water-cooled torches rated up to 500 amps. Vertical design conveniently mounts to Miller cylinder rack in place of one cylinder.

Coolmate™ 4  #042 288
For use with water-cooled torches rated up to 600 amps. Tough molded polyethylene case with carrying handle.

Coolants
#043 810 Coolant, low-conductivity
#043 809 Coolant, aluminum protecting
Sold in cases of four 1-gallon recyclable plastic bottles. Miller coolants contain a base of ethylene glycol and deionized water to protect against freezing to -37°F (-38°C) or boiling to 227°F (108°C). Both also contain a compound that resists algae growth.
**Tongs and Tips** (Must be ordered separately from spot welders. One pair of tips are supplied with each set of tongs.)

<table>
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<tr>
<th>TONGS</th>
<th>TONG LENGTH</th>
<th>TIPS INCLUDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>STANDARD 90° 4-1/4 in (108 mm)</td>
<td>#040 218</td>
<td>—</td>
</tr>
<tr>
<td>STANDARD 90° 6-1/4 in (159 mm)</td>
<td>#040 219</td>
<td>—</td>
</tr>
<tr>
<td>STANDARD 90° No. 1 Morse Taper</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>STANDARD 90° No. 2 Morse Taper</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>STANDARD 45° 4-1/4 in (108 mm)</td>
<td>—</td>
<td>#041 004</td>
</tr>
<tr>
<td>STANDARD 45° 6-1/4 in (159 mm)</td>
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<td>#041 005</td>
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<td>STANDARD 45° No. 1 Morse Taper</td>
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</tr>
<tr>
<td>STANDARD 45° No. 2 Morse Taper</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>TT-6W 7-1/2 in (190 mm)</td>
<td>—</td>
<td>#041 838</td>
</tr>
<tr>
<td>TT-6W No. 2 Morse Taper</td>
<td>—</td>
<td>#040 308</td>
</tr>
<tr>
<td>TT-9W 9 in (229 mm)</td>
<td>—</td>
<td>#041 840</td>
</tr>
<tr>
<td>TT-9W No. 2 Morse Taper</td>
<td>—</td>
<td>#040 308</td>
</tr>
</tbody>
</table>

**Notes for tongs and tips:**
- Tongs and tips shown to the left can be used with all PSW and SSW model spot welders. Recommended max. tong length is 18 in (457 mm).
- Tong throat-height dimension for standard 90° and 45° tongs is 4-1/4 in (108 mm). Throat length is measured from the center of the spot tips to the front water hose connection. X = tong length.
- One set of tips is supplied with each set of tongs.
- Tips are made of RWMA Class 2 alloy.
- Maximum welding capabilities are obtained with minimum tong length.
- MT = Morse Taper.
- No. 1 Morse Taper has smaller diameter than No. 2 Morse Taper.

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<tr>
<th>TIPS</th>
<th>QUANTITY</th>
<th>WHERE USED</th>
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<tbody>
<tr>
<td>No. 1 MT (Pointed)</td>
<td>#040 223</td>
<td>2 tips Standard No. 1 Tongs, 90°</td>
</tr>
<tr>
<td>No. 1 MT (Offset)</td>
<td>#040 224</td>
<td>2 tips Standard No. 1 Tongs, 90°</td>
</tr>
<tr>
<td>No. 2 MT (Pointed)</td>
<td>#040 308</td>
<td>2 tips Standard No. 2 Tongs, 90°</td>
</tr>
<tr>
<td>No. 1 MT (Pointed)</td>
<td>#040 851</td>
<td>2 tips TT-6W Tongs TT-9W Tongs</td>
</tr>
<tr>
<td>No. 1 MT (Offset)</td>
<td>#040 226</td>
<td>2 tips Standard No. 1 Tongs, 90°</td>
</tr>
<tr>
<td>No. 1 MT (Offset)</td>
<td>#040 298</td>
<td>2 tips Standard No. 1 Tongs, 90°</td>
</tr>
<tr>
<td>No. 2 MT (Offset)</td>
<td>#040 225</td>
<td>2 tips Standard No. 2 Tongs, 45°</td>
</tr>
<tr>
<td>No. 1 MT (Flat Swivel Tip) Matching Pointed Tip</td>
<td>#040 216</td>
<td>2 tips Standard No. 1 Tongs, 90°</td>
</tr>
<tr>
<td>Adapter (adapts No. 1 Morse Taper Tip to No. 2 receptacle)</td>
<td>#040 227</td>
<td>2 adapters Standard No. 2 Tongs, 90° TT-6W Tongs (top) TT-9W Tongs (top)</td>
</tr>
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### Typical Installations

**Stationary Resistance Spot Welding Basic Equipment**

Order tongs and tips separately.

**Also required:**
- Input power cord of proper size per NEC and local codes.
- Coolant source and two coolant hoses (5/16 ID). Hoses must be compatible with coolant. **Note:** Oxy-acetylene hoses are not compatible with ethylene glycol.
- Air hoses.

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### Ordering Information

<table>
<thead>
<tr>
<th>Equipment and Options</th>
<th>Stock No.</th>
<th>Description</th>
<th>Qty.</th>
<th>Price</th>
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<tbody>
<tr>
<td>SSW-2020 ATT</td>
<td>#903 826</td>
<td>Stationary, air-operated, 230 VAC, 50/60 Hz</td>
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<tr>
<td>SSW-2040 ATT</td>
<td>#903 827</td>
<td>Stationary, air-operated, 460 VAC, 50/60 Hz</td>
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**Tongs**

- Order separately
- Ordered by the pair. One pair of tips included with each pair of tongs. See page 3 for tong/tip combinations

**Tips**

- Order spares or additional types
- One pair of tips included with each pair of tongs. See page 3 for tips that can be ordered in pairs or individually

**Accessories**

- Tip Dresser
  - #040 228

**Coolant Systems**

- Coolmate™ V3
  - #043 007 115 VAC 5/8-18 left-hand inlet/outlet receptacles
  - #043 008 230 VAC 5/8-18 left-hand inlet/outlet receptacles
- Coolmate™ V3
  - #043 009 115 VAC 5/8-18 left-hand inlet/outlet receptacles
- Coolmate™ V4
  - #042 288 115 VAC 5/8-18 left-hand inlet/outlet receptacles

**Coolant Solution**

- Low Conductivity
  - #043 810 1 gallon, must be ordered in multiples of 4
- Aluminum Protecting
  - #043 809 1 gallon, must be ordered in multiples of 4

**Miscellaneous**

- Coolant Hoses
  - One coolant “out” and one coolant “in” hose required. One end 5/8-18 left-hand male fitting and the other end “slip-on” secured with hose clamp. 5/16 ID hoses must be compatible with coolant.
- Air Hoses
  - Air supply to air filter to back of controller. Air Filter has 1/4 in pipe thread female fittings. Controller has 5/8-18 left-hand thread female fittings.
- Input Power Cord
  - To be supplied by local source to meet local electrical codes and guidelines.

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