ARCMASTER
Industrial Portable Welding Power Sources
ARCMASTER®
Industrial Portable Welding Power Sources
The Tweco® ArcMaster® 220 ACDC, 301 ACDC, 401S and 401MST family of portable industrial welding equipment has been completely overhauled, re-engineered and expanded following extensive research and development activities. We have rebuilt our range to ensure products meet your requirements and expectations for outstanding performance, reliability and durability.

We distinguish ourselves from our competition through superior featured, dependable products, technical innovation and excellence in customer service and technical support.

Our upgraded ArcMaster industrial portable range is proof of this commitment to deliver quality equipment that does the job and exceeds expectations. A wealth of features and options make Tweco ArcMasters the perfect choice for the serious welding professional.

Designed for industrial use; the ArcMaster range is lightweight for portability from job site to job site. The compact size ensures the minimum footprint in the shop where space is limited and suits well for use with 4, 6 or 8 pack racks. The ArcMaster’s metal design with lifting handle guarantees durability and portability in the most rugged environments.

**APPLICATIONS**

- Industrial Fabrication
- Power Generation Plants
- Stainless Steel & Sanitary Pipe Fabrication
- Shipboard Installation & Repair
- Petro / Chemical Fabrication
- Industrial Aluminum Fabrication
- Maintenance & Repair
ARCMASTER® 220 ACDC
AC/DC HF TIG/STICK
Part No. W1009300

• 220 Amps
• 208-230/400/460 VAC Input
• Single/Three Phase
• Less than 30 lbs

MACHINE FEATURES:

• AC and DC output for aluminum and non-ferrous alloys, stainless, mild steel & chrome moly.
• Process Selection between TIG or Stick.
• AC Frequency: Adjustable frequency of the AC square wave when welding on aluminum for optimized set up.
• Wave Balance: Adjustable for optimized penetration or cleaning action when welding on aluminum.
• Pulse: Changes the weld current from high to low at a specified frequency, reduces heat input on thin material.
• Preflow & Postflow: Enables independent control over shielding gas before and after the weld.
• Initial Current / Upslope / Downslope & Crater modes: Eliminates blow holes on starting and cracking at the end of the weld.
• HF Arc Start: Provides non-contact arc starting that eliminates tungsten or material contamination.
• Lift TIG Start: Provides optimized TIG arc starting without the use of high frequency.
**ARCMASTER® 301 ACDC**

**AC/DC HF TIG/STICK**

Part No. W1009400

- **300 Amps**
- **208-230/400/460 VAC Input**
- **Single/Three Phase**
- **Less than 36 lbs**

**Digital Meters:** Voltage and Amperage; Preview and hold capability for easy set up.

**Trigger Hold:** 4T (Latch) eliminates operator fatigue.

**Gas Purge:** Ensures gas lines are purged at start of weld.

**Tiptronics Job Save:** Save up to 100 parameter application settings for quality repeatable welds.

**Tungsten Size:** Select tungsten size for optimum starting performance.

**Spot Mode:** Enables timer functions for consistent spot welds.

**Excellent Portability:** Small size and weight ensures best workspace footprint and job site portability.

**Overload Protection:** Shuts down the power source to protect the internal electrical components from overheating.

**Meets IP23S Standards:** Suitable for outdoor use.

**Approvals:** IEC 60974-1, CSA E60974-1, UL 60974-1.
**ARCMASTER® 401S**
**STICK/LIFT TIG**
Part No. W1009100

- CC, DC, Stick / Lift TIG / Carbon Arc Gouging
- Process Selection between Stick and Lift TIG
- Remote Receptacle: Allows remote devices to be connected for controlling amperage and output contactor.
- Digital Amp Meter: Preview and hold capability for easy set up.

**MACHINE FEATURES:**

- **400 Amps of maximum output:** Suitable for Carbon Arc Gouging up to ¼” carbons.
- **208-230/400/460 VAC Input:** Plug and play, no voltage changeover required.
- **Single/Three Phase:** For ultimate input voltage flexibility.
- **Excellent E6010 electrode (cellulose) performance.**
- **Adjustable Hot Start and Arc Force** for optimum Stick electrode performance.
- **Excellent Portability:** Small size and weight ensures best workspace footprint and job site portability, less than 41 pounds.
- **Remote Contactor Function:** Enables remote contactor ON/OFF.
**ARCMASTER® 401MST**

MIG/STICK/LIFT TIG

Part No. W1009500

- **CC/CV, DC, MIG / Stick / Lift TIG**
- **Process Selection between MIG, Stick and Lift TIG**
- **Remote Receptacles**: Allows remote devices to be connected for controlling amperage, output contactor and wire feeder.
- **Digital Volt/Amp Meters**: Preview and hold capability for easy set up.
- **Job Save**: Save up to 5 parameter application settings for quality repeatable welds.
- **Adjustable Inductance Control**: For arc stability and spatter control.

- **Lift TIG Start**: Provides optimized TIG arc starting without the use of high frequency.
- **Overload Protection**: Shuts down the power source to protect the internal electrical components from overheating.
- **Meets IP23S Standards**: Suitable for outdoor use.
- **Approvals**: IEC 60974-1, CSA E60974-1, UL 60974-1.
Which **ARCMASTER®** is Best for You?

### SELECTION COMPARISON

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<th>SPECIFICATIONS</th>
<th>ARCMASTER 220 ACDC</th>
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<th>ARCMASTER 401MST</th>
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<tr>
<td><strong>Type:</strong></td>
<td>AC/DC, CC</td>
<td>AC/DC, CC</td>
<td>DC, CC</td>
<td>DC, CC/CC</td>
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<tr>
<td><strong>Processes:</strong></td>
<td>HF TIG (GTAW)</td>
<td>HF TIG (GTAW)</td>
<td>Stick (SMAW)</td>
<td>MIG (GMAW)</td>
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<td>Lift TIG (GTAW)</td>
<td>Lift TIG (GTAW)</td>
<td>Lift TIG (GTAW)</td>
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<td></td>
<td>Stick (SMAW)</td>
<td>Stick (SMAW)</td>
<td>Air Carbon Arc Gouging (CAG)</td>
<td>Stick (SMAW)</td>
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<tr>
<td><strong>Maximum Output</strong></td>
<td>220 Amp</td>
<td>300 Amp</td>
<td>400 Amp</td>
<td>400 Amp</td>
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<tr>
<td><strong>MIG (GMAW) Welding Output @ 104°F (40°C)</strong></td>
<td>220A @ 40% Duty Cycle</td>
<td>300A @ 35% Duty Cycle</td>
<td>400A @ 25% Duty Cycle</td>
<td>400A @ 25% Duty Cycle</td>
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<tr>
<td></td>
<td>180A @ 60% Duty Cycle</td>
<td>220A @ 60% Duty Cycle</td>
<td>300A @ 60% Duty Cycle</td>
<td>300A @ 60% Duty Cycle</td>
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<tr>
<td><strong>TIG (GTAW) Welding Output @ 104°F (40°C)</strong></td>
<td>160A @ 100% Duty Cycle</td>
<td>180A @ 100% Duty Cycle</td>
<td>200A @ 100% Duty Cycle</td>
<td>200A @ 100% Duty Cycle</td>
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<tr>
<td></td>
<td>220A @ 40% Duty Cycle</td>
<td>220A @ 40% Duty Cycle</td>
<td>200A @ 25% Duty Cycle</td>
<td>200A @ 25% Duty Cycle</td>
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<tr>
<td><strong>STICK (SMAW) Welding Output @ 104°F (40°C)</strong></td>
<td>140A @ 60% Duty Cycle</td>
<td>170A @ 60% Duty Cycle</td>
<td>200A @ 100% Duty Cycle</td>
<td>200A @ 100% Duty Cycle</td>
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<tr>
<td></td>
<td>120A @ 100% Duty Cycle</td>
<td>170A @ 100% Duty Cycle</td>
<td>200A @ 100% Duty Cycle</td>
<td>200A @ 100% Duty Cycle</td>
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<tr>
<td><strong>Current Range:</strong></td>
<td>MIG 3 - 220 Amp</td>
<td>5 - 300 Amp</td>
<td>5 - 400 Amp</td>
<td>5 - 400 Amp</td>
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<tr>
<td></td>
<td>10- 170 Amp</td>
<td>10- 200 Amp</td>
<td>5 - 400 Amp</td>
<td>5 - 400 Amp</td>
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<tr>
<td><strong>Voltage Range:</strong></td>
<td>MIG 5 - 36 Volt</td>
<td>5 - 36 Volt</td>
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<td><strong>Nominal OCV Volt</strong></td>
<td>65 VDC</td>
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<td><strong>Warranty Period</strong></td>
<td>3 Years*</td>
<td>3 Years*</td>
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<td><strong>Approvals</strong></td>
<td>IEC 60974-1, CSA E60974-1, UL 60974-1</td>
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<tr>
<td><strong>Protection Class</strong></td>
<td>IP23S</td>
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<tr>
<td><strong>Power Source Dimensions: (H x W x D)</strong></td>
<td>12.8&quot; x 7.3&quot; x 19.0&quot; (326 mm x 185 mm x 483 mm)</td>
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<td>15.7&quot; x 7.3&quot; x 20.3&quot; (400 mm x 185 mm x 515 mm)</td>
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</tr>
<tr>
<td><strong>Power Source Weight</strong></td>
<td>29.5 lb (13.4 kg)</td>
<td>35.9 lb (16.3 kg)</td>
<td>40.9 lb (18.6 kg)</td>
<td>40.9 lb (18.6 kg)</td>
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**PRIMARY POWER**

- **Primary Voltage**: 208-230/400/460 VAC
- **Supply Voltage Range**: 187 - 506 VAC
- **Number of Phases**: Single/Three Phase
- **Supply Frequency**: 50/60 Hz
- **Rated kVA @ 220 Amp**: 6.0 kVA
- **Maximum Input Current**: 23.5 Amp

**Ordering Information**

- **Part No:** W1009300: ArcMaster 220 ACDC Power Supply
- **Part No:** W1009400: ArcMaster 301 ACDC Power Supply
- **Part No:** W1009100: ArcMaster 401S Power Supply
- **Part No:** W1009500: ArcMaster 401MST Power Supply

*Limited Warranty, refer to warranty schedule.*