AugmentedArc®
Augmented Reality Welding System

Quick Specs

<table>
<thead>
<tr>
<th>Processes</th>
<th>Material Types</th>
<th>Joints</th>
<th>Workpiece Positions</th>
<th>Input Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIG (GMAW)</td>
<td>Steel</td>
<td>Bead on plate</td>
<td>Horizontal</td>
<td>115 V, 15 A, 60 Hz</td>
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<tr>
<td>Flux-cored (FCAW)</td>
<td>Stainless</td>
<td>T-joint</td>
<td>Vertical</td>
<td>230 V, 10 A, 50 Hz</td>
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<tr>
<td>Stick (SMAW)</td>
<td>Aluminum</td>
<td>Butt joint</td>
<td>Flat</td>
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<td>TIG (GTAW)</td>
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<td>Lap joint</td>
<td>Overhead</td>
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<td></td>
<td></td>
<td>Pipe-to-plate</td>
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<tr>
<td></td>
<td></td>
<td>Butt pipe</td>
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</tbody>
</table>

The industry’s most realistic welding simulation solution for classroom training.

For beginner to advanced-level weld students, the AugmentedArc system simulates multiple welding processes, blending real-world and computer-generated images into a unique, augmented reality environment.

AugmentedArc simulator and helmet both feature augmented-reality displays.

Specially designed gun, torch, stinger and filler metal components relay user data to the computer for processing.

AugmentedArc work stand allows for training in out-of-position applications.

Specially coded workpieces provide a wide range of training applications.

Teacher software is a user-friendly and flexible learning management system (LMS) that allows instructors to manage courses, content and students, and maximizes the usefulness of AugmentedArc welding simulators.

- Create and manage your own welding curriculum
  - Create quizzes, theory and welding simulation exercises
  - Use pre-developed exercises or fully customize your own exercise parameters, technique and scoring criteria
  - Offline mode allows you to manage the content from anywhere

- Manage student progress
  - Review the complete history and detailed results of student activities
  - View real-time results of welding simulations
  - View statistics and download reports for individual students or entire class

AugmentedArc simulator and Teacher software both feature augmented-reality displays.

Teacher software comes complete with:
- AugmentedArc simulator
- Teacher software (see below for description)
- Black Infinity® AR helmet with premium headgear
- AugmentedArc router
- MIG gun with AR tip
- SMAW stinger
- TIG torch with AR tip
- Two electrode/filler rods with AR tips
- Work stand for out-of-position applications
- Five workpieces: t-joint, butt joint, lap joint, pipe-to-plate and butt pipe

System is warranted for one year, parts and labor.
Optimize instructor efficiency by using the Teacher software to create a virtual classroom with customized curriculum, quizzes and weld exercises. Real-time feedback is provided on users’ technique to help correct errors. Reinforce proper welding practices and accelerate skill advancement prior to actual live arc welding in a lab.

Reduce overall training time compared to traditional methods, with the realistic live arc welding simulation of the AugmentedArc. Minimize material cost by saving wire, gas and workpieces in this simulation environment allowing students to define their welding skills before beginning live arc welding.

Build a larger, more-skilled welding workforce when computer-savvy individuals are drawn to welding education programs that increase their success with live arc welding.

AugmentedArc® System

Augmented Reality Displays

AugmentedArc display
- Helmet’s external optical sensor captures and sends images of coded devices and workpieces to AugmentedArc simulator
- Simulator generates three-dimensional images of metal workpieces, augmenting them into a real-world environment
- Display on simulator replicates the view inside helmet to give real-time feedback

Welding simulation screen
- Visual graphical aids guide the user to achieve target parameters
- Adherence to pre-determined or custom welding parameters is monitored, with confirmation when maintained or alerts when exceeded
- Realistic arc sounds from inside helmet speakers accompany the visuals for a truly immersive experience

Post-weld feedback screen
- User’s performance is scored, graphed and recorded for playback
- Performance feedback on various parameters is provided
- Video is stored and available for replay for student and instructor review via teacher software

Specifications (Subject to change without notice.)

<table>
<thead>
<tr>
<th>Input Power</th>
<th>Processes</th>
<th>Welding Positions</th>
<th>Joints</th>
<th>Dimensions</th>
<th>Net Weight</th>
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</thead>
<tbody>
<tr>
<td>115 V, 15 A, 60 Hz 230 V, 10 A, 50 Hz</td>
<td>GMAW, FCAW, SMAW, GTAW</td>
<td>1F–4F, 1G–6G</td>
<td>Bead on plate, t-joint, butt joint, lap joint, pipe-to-plate, butt pipe</td>
<td>Simulator H: 21 in. (533 mm) W: 9.38 in. (238 mm) D: 17.25 in. (438 mm)</td>
<td>Simulator 20.7 lb. (9.4 kg) Welding helmet 1.97 lb. (0.9 kg)</td>
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<table>
<thead>
<tr>
<th>Voltage/Amperage Selection</th>
<th>Polarity Selection</th>
<th>Shielding Gas Selection</th>
<th>Wire Speed Selection</th>
<th>Base Material Selection</th>
<th>Workpiece Selection</th>
<th>Stick Electrode Selection</th>
<th>Diameter Selection</th>
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<tbody>
<tr>
<td>GMAW</td>
<td>10–38 V 50–425 A</td>
<td>DCEP, DCEN, AC</td>
<td>CO2, Argon CO2, Argon</td>
<td>GMAW/FCAW 50–1,000 ipm (1.27–25.4 m/min.)</td>
<td>Carbon steel Stainless steel Aluminum</td>
<td>1/8, 1/4, 3/8 in. (3.2, 6.4, 9.5 mm)</td>
<td>E7018, E6010, E6013</td>
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Solid wire
- .030, .035, .045 in. (0.8, 1.0, 1.2 mm)
- Stick electrode
- 1/8, 3/32, 5/32 in. (2.50, 3.25, 4.0 mm)
- Filler rod
- 5/64, 3/32 in. (2.0, 2.4 mm)
Genuine Miller® Accessories and Replacement Components

AugmentedArc® Controller

**301395**
Provides the capability to link multiple AugmentedArc systems together into a virtual classroom environment.

Heavy-Duty Transportation Cases

**951775**
Includes two heavy-duty cases which provide rugged protection for the complete system during transportation or storage. One case holds helmet and AugmentedArc unit, and the second case holds MIG gun, SMAW stinger, TIG torch, workpieces and work stand.

TIG Foot Pedal Kit

**286033**
Includes TIG foot pedal, connection cable and adapter cable.

Magnifying Lenses

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Replacement Components

AugmentedArc® Router

**277397** Stand-alone
**278181** Classroom
Select router based on configuration being used. Includes Ethernet cable.

Work Stand

**277266**
Allows for training in out-of-position applications.

MIG Gun Replacement

**301401**
Note: MIG gun AR tip sold separately.

MIG Gun AR Tip

**277269**

MIG Gun AR Tip

**277269**

SMAW Stinger Replacement

**277268**

SMAW Electrode/TIG Filler Rod

**277267**
**279460**

TIG Torch Replacement

**301400**

TIG Torch AR Tip

**277272**

Replacement Gen III Headgear

**271325**
Headgear with oversized comfort cushion provides extensive adjustability, settings and enhanced support.

Headgear Suspension Pad

**271326**
Enhances comfort of Gen II and III headgear.

Magnetic Magnifying Lens Holder

**286018**

Workpieces

Butt Joint Workpiece

**277274**

T-Joint Workpiece

**277270**

Pipe-to-Plate Workpiece

**277276**

Butt Pipe Workpiece

**277275**

Lap Joint Workpiece

**277273**

Butt Joint Workpiece

**277274**

T-Joint Workpiece

**277270**

Pipe-to-Plate Workpiece

**277276**

Butt Pipe Workpiece

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MIG Gun AR Tip

**277269**

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T-Joint Workpiece

**277270**

Pipe-to-Plate Workpiece

**277276**

Butt Pipe Workpiece

**277275**

Lap Joint Workpiece

**277273**
### Ordering Information

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**Date:**

**Total Quoted Price:**

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