

# AugmentedArc®

## Augmented Reality Welding System

### Quick Specs

#### Processes

MIG (GMAW)  
Flux-cored (FCAW)  
Stick (SMAW)  
TIG (GTAW)

#### Material Types

Steel  
Stainless  
Aluminum

#### Joints

Bead on plate  
T-joint  
Butt joint  
Lap joint  
Pipe-to-plate  
Butt pipe

#### Workpiece Positions

Horizontal  
Vertical  
Flat  
Overhead

#### Input Power

115 V, 15 A, 60 Hz  
230 V, 10 A, 50 Hz

### 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 coded workpieces** provide a wide range of training applications.

**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.

#### Comes complete with:

- AugmentedArc simulator
- Teacher software (see below for description)
- Black Infinity™ AR helmet with premium headgear
- AugmentedArc router
- MIG gun with AR nozzle
- SMAW stinger
- TIG torch with AR nozzle
- 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

**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



System is warranted for one year, parts and labor.



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#### MillerWelds.com



## AugmentedArc® System



**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.

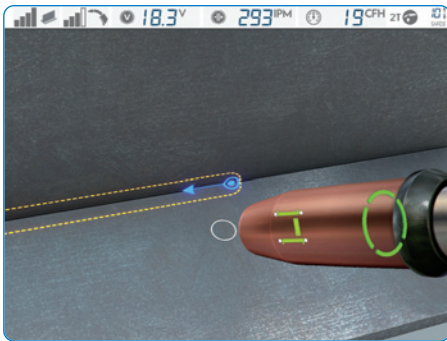


**Minimize material cost** by saving wire, gas and workpieces in this simulation environment allowing students to define their welding skills before beginning live arc welding.



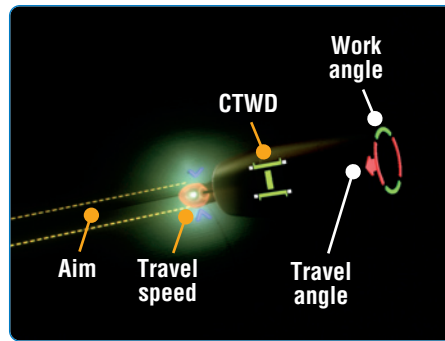
**Build a larger, more-skilled welding workforce** when computer-savvy individuals are drawn to welding education programs that increase their success with live arc welding.

## 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.)

Input Power		Processes	Welding Positions	Joints		Dimensions		Net Weight
115 V, 15 A, 60 Hz 230 V, 10 A, 50 Hz		GMAW FCAW SMAW GTAW	1F–4F, 1G–6G	Bead on plate, t-joint, butt joint, lap joint, pipe-to-plate, butt pipe		Simulator H: 21 in. (533 mm) W: 9.38 in. (238 mm) D: 17.25 in. (438 mm)		Simulator 20.7 lb. (9.4 kg)  Welding helmet 1.97 lb. (0.9 kg)
Voltage/Amperage Selection	Polarity Selection	Shielding Gas Selection	Wire Speed Selection	Base Material Selection	Workpiece Selection	Stick Electrode Selection	Diameter Selection	
GMAW 10–38 V 50–425 A FCAW 10–38 V 50–425 A SMAW 50–425 A GTAW 50–425 A	DCEP DCEN AC	CO <sub>2</sub> Argon O <sub>2</sub> Argon CO <sub>2</sub> Argon	GMAW/FCAW 50–1,000 ipm (1.27–25.4 m/min.)	Carbon steel Stainless steel Aluminum	1/8, 1/4, 3/8 in. (3.2, 6.4, 9.5 mm)	E7018 E6010 E6013	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

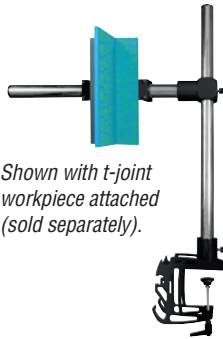
212238 1.50  
212240 2.00  
212242 2.50

## Replacement Components



## AugmentedArc® Router 277397

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



*Shown with t-joint workpiece attached (sold separately).*

## Work Stand 277266

Allows for training in out-of-position applications.



## MIG Gun Replacement 301401

*Note: MIG gun AR nozzle sold separately.*



## MIG Gun AR Nozzle 277269



*Shown with electrode/filler rod and AR tip (sold separately).*

## SMAW Stinger Replacement 277268



## SMAW Electrode/TIG Filler Rod 277267

Electrode/Filler Rod AR Tip 279460



*Shown with TIG torch AR nozzle (sold separately).*

## TIG Torch Replacement 301400



## TIG Torch AR Nozzle 283068



## Black Infinity™ AR Helmet LED Cover Replacement 276240



## Replacement Gen III Headgear 271325

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



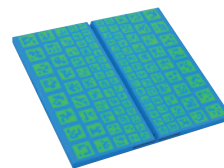
## Headgear Suspension Pad 271326

Enhances comfort of Gen II and III headgear.

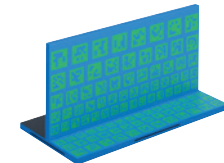


## Magnetic Magnifying Lens Holder 286018

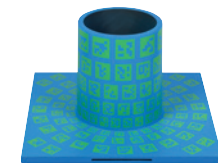
## Workpieces



## Butt Joint Workpiece 277274



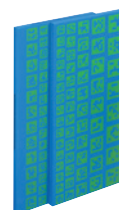
## T-Joint Workpiece 277270



## Pipe-to-Plate Workpiece 277276



## Butt Pipe Workpiece 277275



## Lap Joint Workpiece 277273

## Additional Information

Visit us on YouTube for  
informative videos on:



**What it is** <https://youtu.be/xCbmFFPSF7o>



**Set up** <https://youtu.be/AKJfGgRrd2l>

## Ordering Information

Equipment	Stock No.	Description	Qty.	Price
<b>AugmentedArc® System</b>	<b>951823</b>	See front page for system components		
<b>Accessories</b>				
AugmentedArc Controller	<b>301395</b>	For multiple system connectivity		
Heavy-Duty Transportation Cases	<b>951775</b>	Package including two cases that protect the complete system		
TIG Foot Pedal Kit	<b>286033</b>			
Magnifying Lenses	<b>212238</b>	1.50		
	<b>212240</b>	2.00		
	<b>212242</b>	2.50		
<b>Replacement Components</b>				
AugmentedArc Router	<b>277397</b>	Stand-alone router. With Ethernet cable		
	<b>278181</b>	Classroom router. With Ethernet cable		
Work Stand	<b>277266</b>	For out-of-position applications		
MIG Gun	<b>301401</b>	AR nozzle NOT included		
MIG Gun AR Nozzle	<b>277269</b>			
SMAW Stinger	<b>277268</b>	Electrode and AR tip NOT included		
SMAW Electrode/TIG Filler Rod	<b>277267</b>			
Electrode/Filler Rod AR Tip	<b>279460</b>			
TIG Torch	<b>301400</b>	Filler rod and AR nozzle NOT included		
TIG Torch AR Nozzle	<b>283068</b>			
Black Infinity™ AR Helmet LED Cover	<b>276240</b>			
Replacement Gen III Headgear	<b>271325</b>			
Headgear Suspension Pad	<b>271326</b>			
Magnetic Magnifying Lens Holder	<b>286018</b>			
<b>Workpieces</b>				
Butt Joint Workpiece	<b>277274</b>			
T-Joint Workpiece	<b>277270</b>			
Pipe-to-Plate Workpiece	<b>277276</b>			
Butt Pipe Workpiece	<b>277275</b>			
Lap Joint Workpiece	<b>277273</b>			

Date:

Total Quoted Price:

Distributed by:

