

QUAKELOGIC

DUAL-USER

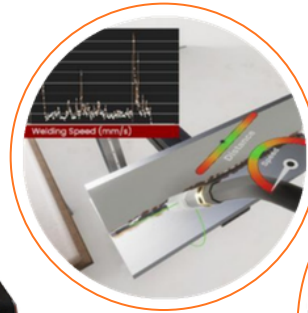
WELDING SIMULATOR



QL-Dual User WS

# QL-DUAL USER

## DUAL-USER WELDING SIMULATOR



### MASTER WELDING SKILLS IN AN IMMERSIVE DUAL-USER VIRTUAL TRAINING ENVIRONMENT

QuakeLogic proudly offers the QL-Dual User Welding Simulator, a high-performance virtual reality training system designed for welding education, workforce development, vocational schools, and industrial training. Featuring simultaneous dual-user operation, realistic welding simulation, objective performance evaluation, and instructor management tools, the system delivers safe, repeatable, and effective hands-on training.

- Improves training efficiency by enabling two students to perform independent welding exercises simultaneously with real-time performance monitoring, objective scoring, and instructor supervision.
- Reduces operational costs by eliminating consumable materials, minimizing equipment wear, and providing repeatable virtual practice without live arc exposure.
- Enhances training safety through immersive virtual reality technology, allowing students to develop practical welding skills without exposure to heat, arc flash, fumes, sparks, or other workplace hazards.
- Supports comprehensive welding education through SMAW, GMAW/MIG, FCAW, and GTAW/TIG processes, multiple welding positions, WPS-based training, realistic welding simulation, performance analysis, and structured skill development with independent dual-user training and evaluation.

### What's Included »

- QL-Dual User Welding Simulator
- Dual-User Integrated Training Console
- Virtual Reality Training System
- Dual VR Headsets with Tracking System
- Dual Welding Device Sets (SMAW, GMAW/FCAW & GTAW/TIG)
- Adjustable Dual Welding Stand System
- Instructor Management & Assessment Software
- Real-Time Performance Monitoring & Scoring
- Student Management, Reporting & Replay System
- User Manual, Installation Guide & Training Documentation

## KEY FEATURES

- High-fidelity virtual reality welding simulation delivers realistic, repeatable, and immersive hands-on training for vocational education, workforce development, and industrial skill enhancement.
- Supports industry-standard SMAW, GMAW/MIG, FCAW, and GTAW/TIG welding processes with configurable welding parameters, WPS settings, and multiple material options.
- Simulates real welding conditions with dynamic weld puddles, sparks, slag formation, sound effects, and welding discontinuities for an authentic training experience.
- Provides real-time performance evaluation with objective scoring, replay functions, comprehensive instructor feedback, and detailed student performance analysis.
- Integrated instructor management and student administration software enable live monitoring, training management, progress tracking, and professional report generation.
- Optical infrared tracking technology ensures accurate torch movement detection, posture analysis, and precise motion tracking throughout every welding exercise.
- Adjustable dual welding stand systems support multiple welding positions, realistic workpiece configurations, and simultaneous independent dual-user operation.
- Immersive virtual reality technology eliminates exposure to arc flash, heat, welding fumes, sparks, and consumable material waste while improving overall training safety.
- Comprehensive training software includes lesson modes, practical examinations, ghost guidance, homework assignments, and structured learning progression for skill development.
- Dual VR training stations with integrated software and hardware provide an efficient, classroom-ready solution for technical colleges, vocational schools, and industrial training centers.

## PRODUCT FEATURES

### Supported Welding Processes

SMAW / Stick Welding  
GMAW / MIG Welding  
FCAW / Flux-Cored Arc Welding  
GTAW / TIG with Filler Metal  
GTAW / TIG without Filler Metal

### Training Features

WPS-Based Welding Training  
Real-Time Performance Scoring  
Replay & Performance Analysis  
Ghost Guidance Mode  
Practical Exams & Homework  
Lesson & Demonstration Modes  
Student Progress Tracking

### Welding Capabilities

Multiple Welding Positions (1G–6G, 1F–6F)  
Plate & Pipe Welding Practice  
Multiple Joint Configurations  
Realistic Welding Physics  
Virtual Weld Defect Simulation  
Dynamic Welding Effects

### Instructor & Student Management

Live Student Monitoring  
Student Account Management  
PDF Report Generation  
Performance Evaluation Tools  
Offline Instructor Functions  
Training Administration

### Tracking & Hardware

Optical Infrared Tracking System  
Dual VR Headsets  
Dual Welding Device Sets  
Dual Adjustable Welding Stands  
Integrated Touchscreen Console  
External Instructor Displays

### Languages

English or Customized

**For more information about the QL-Dual User Welding Simulator, please contact QuakeLogic Inc.**

## JOINTS / POSITIONS

Type	Description	SMAW	GMAW	FCAW	GTAW / TIG
Groove Plate	V-Butt Plates	X	X	X	X
Pipe Groove	V-Butt Pipe	X	X	X	X
Groove Positions	Plate – PA, PC, PF/PG, PE, 1G, 2G, 3G, 4G	X	X	X	X
Pipe Positions	PH/PJ, 5G, 6G	X	X	X	X
Fillet Joint	T-Joint Inner Corner	X	X	X	X
Pipe on Plate	Pipe-to-Plate T-Joint	X	X	X	X
Fillet Positions	PB, PD, PF/PG, 1F, 2F, 3F, 4F, 5F	X	X	X	X
Lap Joint	Plate Overlay	X	X	X	X
Straight Bead	Bead Practice	X	X	X	X
Straight Stitching	Bead Practice	X	X	X	X

## BASE MATERIALS

Type	Description	SMAW	GMAW	FCAW	GTAW / TIG
Base Material	Low Carbon / Mild Steel	X	X	X	X
	Stainless Steel	X	X	X	X
	Aluminum	X	X	X	X
Material Thicknesses	3 mm – 10 mm	X	X	X	X

## FILLER MATERIALS

Type	Description	SMAW	GMAW	FCAW	GTAW / TIG
Electrode Type	Selectable Electrode Type	X			
Wire Type	Selectable Wire Type		X	X	X
Electrode Diameter	Selectable Electrode Diameter	X			
Wire Diameter	Selectable Wire Diameter		X	X	X
Shielding Gas	CO <sub>2</sub>		X	X	
	Argon-CO <sub>2</sub> Mixture		X	X	
	Argon				X

## POWER SOURCE FEATURES

Type	Description	SMAW	GMAW	FCAW	GTAW / TIG
Voltage Control	Adjustable Voltage		X	X	X
Current Control	Adjustable Current	X	X	X	X
Output Polarity	DC+, DC-, AC	X	X	X	X
Wire Feed Control	Adjustable Wire Feed Speed		X	X	
Trigger Mode	2T / 4T Selection		X	X	

## ANALYSIS AND DIAGNOSTICS

Type	SMAW	GMAW	FCAW	GTAW / TIG
Live Student Evaluation	X	X	X	X
Real-Time Visual Feedback	X	X	X	X
Graphical Performance Analysis	X	X	X	X
Replay & Welding Analysis	X	X	X	X
PDF Report Export	X	X	X	X
Virtual Coupon Inspection	X	X	X	X
Virtual Bend Test (Optional Module)	X	X	X	X

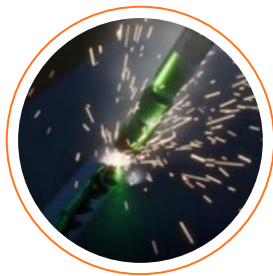
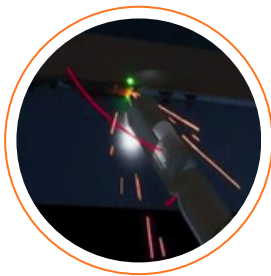
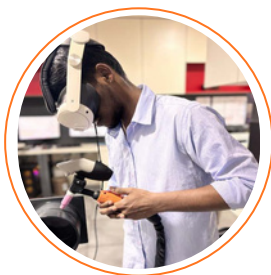
## ADDITIONAL FEATURES

### INSTRUCTOR SOFTWARE

The licensed instructor software supports real-time monitoring of multiple trainees, student and instructor account management, graphical performance comparison, practical examinations, progress tracking, and comprehensive welding performance reporting through Ethernet or wireless connectivity.

### VR TRAINING EQUIPMENT

The system includes two Meta Quest 3 VR headsets, dual welding device sets for SMAW, GMAW/FCAW, and GTAW/TIG, dual VR welding helmets, an integrated touchscreen console, external instructor displays, and a complete optical tracking system, providing a fully immersive dual-user welding training environment.



## TECHNICAL SPECIFICATIONS

Specification	Description
Product	QL-Dual User Welding Simulator
Training Capacity	Simultaneous Dual-User Operation
Vision Technology	Virtual Reality (VR)
VR Headsets	2 × Meta Quest 3
Tracking System	Optical Infrared Tracking System
Base Stations / Cameras	4 Optical Base Stations
Touchscreen Display	Integrated 15-inch Touchscreen
External Displays	2
Welding Processes	SMAW, GMAW/MIG, FCAW, GTAW/TIG
Welding Device Sets	2 Complete Sets
Welding Stand Sets	2 Adjustable Work Stands
Control Software	Instructor, Training & Assessment Software
Student Management	Live Monitoring, Reporting & Performance Evaluation
Communication	USB, Ethernet & Wireless
Power Supply	110–240 VAC, 50/60 Hz
Languages	English or Customized
Warranty	1-Year Manufacturer Warranty



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**About QuakeLogic:**

- QuakeLogic Inc. is a California-based engineering and technology company providing innovative, reliable, and high-quality solutions to customers worldwide.

**Our Commitment**

- At QuakeLogic, we are committed to quality, innovation, and customer satisfaction. We build lasting partnerships by delivering reliable solutions and dependable support.

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