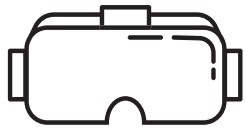




SAVE TIME, BUILD CONFIDENCE  
REDUCE COSTS  
INCREASE CERTIFICATIONS

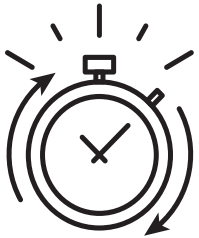
**VRTEX**®  
VIRTUAL TRAINING PLATFORM. REAL RESULTS.

**LINCOLN**®  
**ELECTRIC**

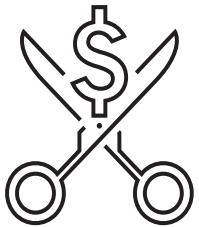


## WHY VRTEX® WELDING TRAINING SYSTEMS?

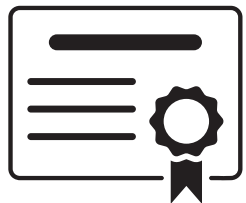
VRTEX® training systems are a game-changer. Instructors who integrate VRTEX® virtual reality welding trainers into their program will reduce material and energy costs, increase certification rates, accelerate training schedules and add a powerful instructional tool to their classroom.



### Features and Benefits



- ✓ Improves efficiency by accelerating students' progress, reducing time required to up-skill
- ✓ Reduces costs by eliminating use of consumables, metal coupons, gas and electricity
- ✓ Increases safety with no metal, sparks, heat, gas or fumes
- ✓ Allows for more practice which creates efficiency and a quicker route to certification
- ✓ Ultimately, boosts student confidence quickly
- ✓ The Oxy-fuel Cutting feature enables welding instructors and students to experience torch cutting in a virtual environment



# VIRTUAL REALITY EXPEDITES EDUCATION

As a tool for welding training, virtual reality delivers the best of all worlds. It provides students with an immersive experience, establishes an inclusive and supportive learning platform, and sustains a student's interest with realistic visual and auditory components.

## The Lincoln Electric Education System is your complete welding education solution.

No other supplier offers a more comprehensive set of products and services for the welding student, educator or industry.

- ✓ Curriculum materials, welding guides, teaching aids and education resources
- ✓ Educator training and professional development classes for every welder skill level
- ✓ Cost and time saving virtual training simulators
- ✓ High quality welding consumables for every application
- ✓ Proper welding PPE, tools and fume extraction systems
- ✓ Welding and cutting equipment
- ✓ Turnkey certification system

“

Before we had the VRTEX®, it was just trial and error right from the beginning. Now, students know about arc length, travel angles, speed and speed of travel before they walk down to the weld shop. That knowledge is because of VRTEX®.

—Joel Boley, Training Instructor,  
Chicago Regional Council of Carpenters Training Center

”



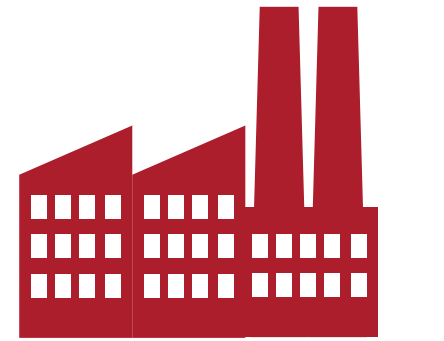
## SAVE TIME. BUILD CONFIDENCE.

The VRTEX® training platform helps to accelerate students' progress and trains them to be skilled welders more quickly. It gets more students into welding booths quickly and safely, which allows for a faster rotation.

- ✓ Training virtually enables educators to double-book time slots, add rotations, and ultimately train more welders
- ✓ Eliminates the intimidation and fear of welding which commonly occurs at the outset of training
- ✓ Promotes a superior level of knowledge retention
- ✓ Helps to build confidence more quickly

Repetition is an important part of the learning process. Students can repeat a weld without losing time in assembly and retacking, therefore they can practice more welds in less time and progress to the real-life lab phase of training with more experience and confidence in their technique.

Virtual reality trainers increase the confidence level of students. Simulated arc augments visualization, memory, and kinetic awareness. The immersive virtual environment creates self-assurance and makes it possible for them to develop tenacity, poise and proficiency in their welding abilities sooner than traditional welding training.



**Proficiency**

**Competency**

**Confidence**



**23%**

Decrease Overall  
Training Time



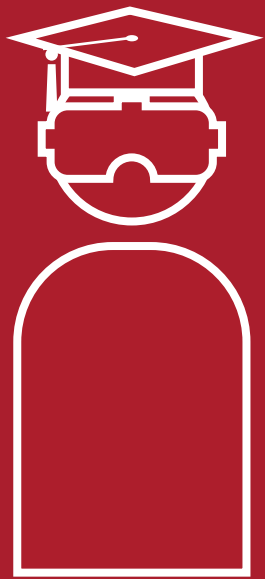
“

The VRTEX® training system **moves students higher, farther, faster.** It has **created more efficiency** in our class structure. The new virtual lab allows us to **accommodate more students.** We usually have a waiting list of about 112 students for 54 spots. Now we can enroll all 112 students. That **supports the industry** because it's what it needs, more highly-qualified welders.

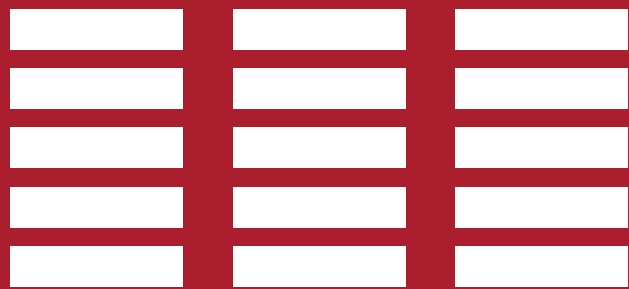
- Scott Lucas PhD, Vice President of Aviation  
Manufacturing & Institutional Effectiveness Wichita State University

”

On average, a student can finish



**15 welds**



**V S**

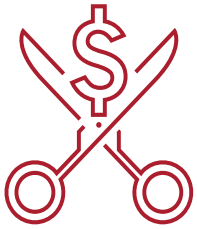
on the VRTEX<sup>®</sup> system



**just 2**



in a welding booth.



## REDUCE COSTS. IMPROVE EFFICIENCY.

By combining the VRTEX® training platform with the Lincoln Electric Education System, educators can get more done in the teaching environment and spend less doing it.

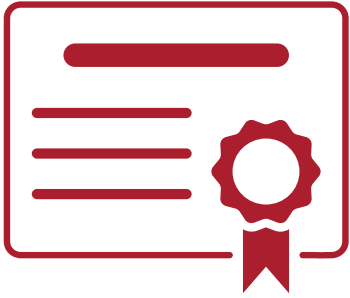
VRTEX® virtual reality welding trainers allow students to quickly practice repetitive welding exercises without the setup time or expenditure of consumables, metal coupons, gas or electricity. It also helps increase safety with no metal, sparks, heat, gas or fumes.

“

“VRTEX® training simulators are **saving us tens of thousands of pounds of material**, not to mention electricity for all of the equipment, which is tremendous.”

—Craig Triplett, Assistant Director  
Chicago Regional Council of Carpenters Training Center

”



## BUILD SKILLS. IMPROVE CERTIFICATION RATES.

Practice makes perfect, and the VRTEX® virtual welding trainer makes practice faster and more efficient. Students can watch demo welds, hear and see audio and visual cues and run welds without having to prep a sample — resulting in more time spent learning and refining each weld.

The VRTEX® virtual reality training system builds skills and improves the certification rate in several ways:

- ✓ Reduces prep time and allows for more practice, which creates a quicker route to certification
- ✓ Offers visual cues so students can adjust their technique, which leads to more accurate welds — and ultimately boosts student confidence
- ✓ Helps prevent potential “bad habits” by teaching the correct technique from the start
- ✓ Builds a robust and solid foundation of skills and efficient techniques, which leads to increased retention rates, skill attainment and certification

“

There is no question that when VRTEX® is used correctly and consistently, it **increases certification rates**. Students understand far better what the expectations and competencies are for the weld they are doing.”

— Joe Ganser, Welding instructor  
Florida Gateway College

”





**42%**

Increase Overall  
Certifications Rates

Actions a

Model shown K4602-1

# ACCELERATE YOUR WELDING & CUTTING TRAINING WITH VRTEX®

Lincoln Electric's VRTEX® 360 virtual reality welding simulators are available in many forms to fit any scope and budget, from a compact tabletop model to a dual system with a large welding stand allowing two students to train independently using one machine. It provides a flexible, powerful, cutting-edge solution for cultivating welding talent quickly and resourcefully.

The cost-effective small-sized solution offers superior graphics, which creates the most realistic and responsive welding puddle available and it convinces with accurate sounds and movements.

## Available VRTEX® Virtual Reality Welding Simulator Models

- K4914-1 VRTEX® 360 Compact
- K4901-1 VRTEX® 360 Single
- K4602-1 VRTEX® 360+ Dual User
- K4603-1 VRTEX® Transport®
- K4633-1 VRTEX® Transport®+ Dual User

## A CUT ABOVE! The first virtual welding trainer with optional cutting mode



The VRTEX® models offer optional oxy-fuel cutting training in one virtual device. This unique feature enables students to also experience torch cutting in a virtual environment. Every aspect of the thermal oxy-fuel cutting feature is designed to address real-world cutting applications – from setting up the torch to executing the cut.

## ALL FEATURES AT A GLANCE

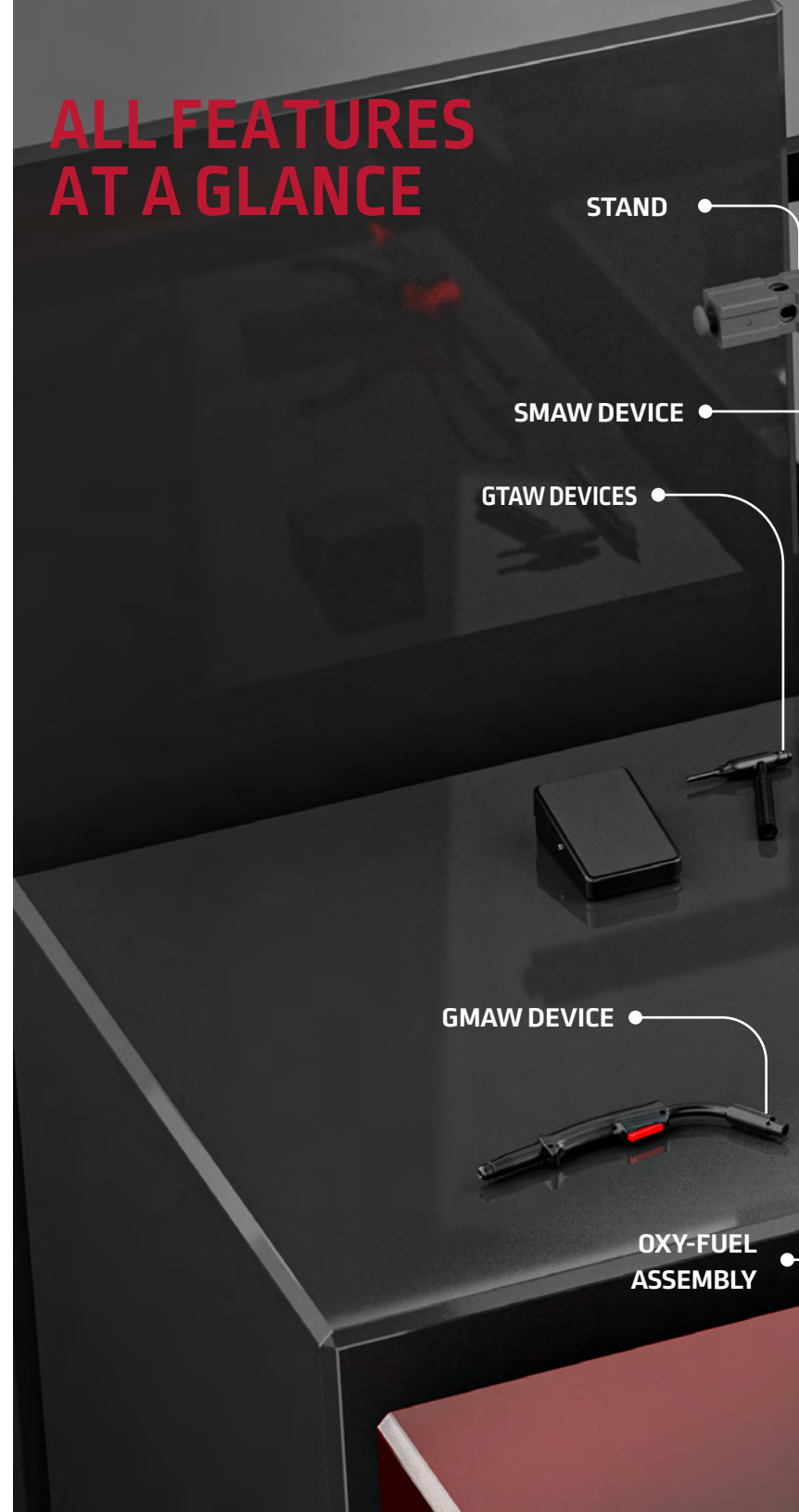
STAND

SMAW DEVICE

GTAW DEVICES

GMAW DEVICE

OXY-FUEL  
ASSEMBLY



# VRTEX<sup>®</sup>

## 360 COMPACT

TOUCHSCREEN

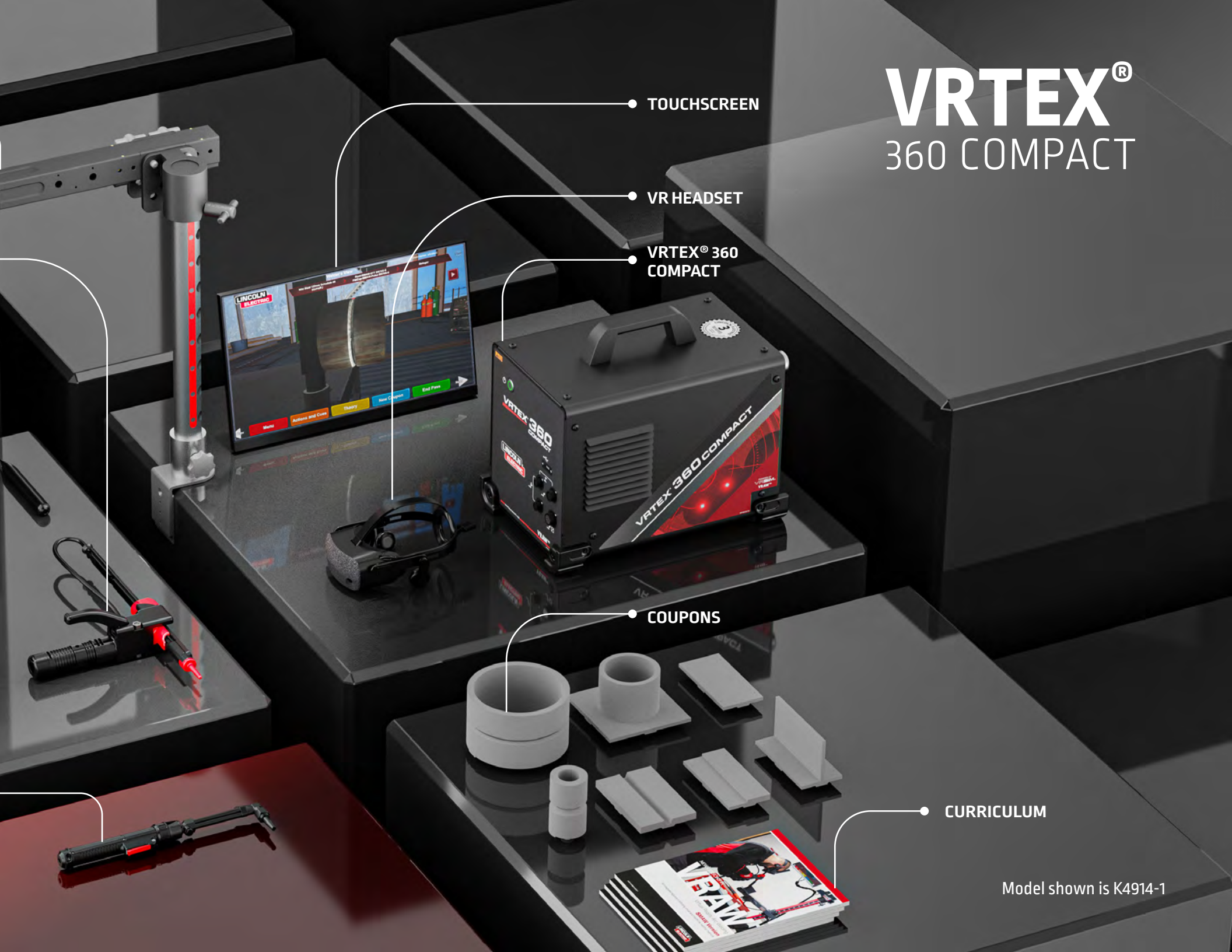
VR HEADSET

VRTEX<sup>®</sup> 360  
COMPACT

COUPONS

CURRICULUM

Model shown is K4914-1



# Setting up a virtual welding lab?

We can help you select the best VRTEX® models for your set up.



## Customer Assistance Policy

The business of Lincoln Electric is manufacturing and selling high quality welding equipment, automated welding systems, consumables, and cutting equipment. Our challenge is to meet the needs of our customers, who are experts in their fields, and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or technical information about their use of our products. Our employees respond to inquiries to the best of their ability based on information and specifications provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment, or to provide engineering advice in relation to a specific situation. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or communications. Moreover, the provision of such information or technical information does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or technical information, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose or any other equivalent or similar warranty is specifically disclaimed.

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All referenced data is supported by the Iowa State University welding research study.

For product information: visit [www.LincolnElectric.com/VRTEX](http://www.LincolnElectric.com/VRTEX) or email [VRTEX@LincolnElectric.com](mailto:VRTEX@LincolnElectric.com)