Salient Characteristics (Dated June 23, 2026)
Brand Name or equal Lincoln VRTEX 360 Compact Welding Simulator

The equipment required must meet the following minimum physical, functional, and performance characteristics:

Characteristic	Technical Specification
1. Self-Contained IT Architecture	The system must be fully self-contained, housing all computing hardware and software internally. It must NOT require a USB or wired tether to an external commercial laptop or PC to run simulations.
2. Multi-Process Simulation	The unit must natively simulate four distinct arc welding processes within a single system: SMAW (Stick), GMAW (MIG), FCAW (Flux-Cored), and GTAW (TIG).
3. Positional Training Capabilities	The system must support positional welding training across Flat, Horizontal, Vertical, and Overhead positions.
4. Joint Execution Capabilities	The system must allow users to simulate welding on common joint types, including Butt, Lap, and Tee joints.
5. Automated Performance Feedback	The system must provide visual feedback and automated scoring on critical welding metrics (such as work angle, travel angle, speed, and distance).
6. Virtual Structural Bend Test	The simulator must include a virtual testing feature that visually demonstrates internal weld flaws, porosity, and structural failure points on the completed virtual weld.