

Arizona Department of Education

Career and Technical Education

Recommended Equipment List

Program: WELDING TECHNOLOGIES
CIP#: 48.0508.00

NOTE: The following items and descriptions are the recommended equipment guidelines for each **CTE Welding Technologies** program. Please note that this list of recommended items does not necessarily need to be supported financially by Federal Perkins or State Priority funding sources. In many cases, local school district funds are used to purchase items on a regular basis (i.e. furniture, consumables, etc.) Further, please understand that this is not an exhaustive list. Local program and business needs may necessitate the purchase of additional equipment and software resources, as may the rapidly-changing nature of the industry-specific technologies used in the program.

Please contact ADE-CTE Program Specialist Bruce Watkins (bruce.watkins@azed.gov) if you have questions regarding the appropriateness of any item you are considering for addition to your **CTE Welding Technologies** program.

Recommended Equipment and Software

Item	Item
Safety Equipment Emergency eye wash Emergency Shower Fire Extinguishers Fire Blankets First Aid Cabinet Face Shields Hearing Protection Fume Extraction / Ventilation/ Grinding and Dust Control Fire resistant or leather welding jackets Welding Helmets with filter plates appropriate for welding process and amperages being used PPE/ Eye Protection/ Hearing protection	General Hand Tools Ball peen hammers Measuring Tapes Combination square set Steel bench rule Metal files Cold chisels Metal punches Center punch Drill bits Adjustable wrenches Pliers Locking Pliers Locking clamps Clamps C-Clamps Allen wrench set Combination wrench metric and standard Screw drivers Philips and flat head Flashlight
Welding Hand Tools Chipping hammer Welding pliers Carbon steel wire brush Stainless steel wire brush Soap stone	Thermal Cutting Equipment Oxy-Fuel Friction lighter / Strikers Oxy-Fuel goggles or Face shields with shade #5 or #7 Oxygen regulators Fuel gas regulators Oxy-fuel hoses 00 – 3/0 cutting tips Heating tip Cutting torch Track torch Track
Plasma Arc PAC power source capable of cutting 3/8" plate Steel PAC Torch Work Lead Consumable parts Kit	Carbon Arc Carbon ARC torch Carbon Arc electrodes

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Item	Item
SWAW Equipment DCCC Welding Power Supply Electrode cable Work piece cable Electrode holder Work Piece Clamp Stick Electrodes	FCAW Equipment DC—constant voltage Electrode cable Work-piece cable Clamp (amp capacity to suit) Wire feeder (to suit power supply and wire diameter) Self-shielded gun (cooling to suit) Gas shielded gun (cooling to suit) Consumable parts kit Parts repair/replacement kit (to suit) Flow meter(s) (CO2 or mixtures Argon/CO2) Gas cylinders (as needed)
GMAW Equipment (Spray and Short Circuit) Electrode cable Workpiece cable Cable Lugs and connects (to suit) Work clamps (amp capacity to suit) Wire feeder (to suit power supply and wire diameter) Gun (cooling to suit) Consumable Parts Kit (0.030-0.045) Parts repair / replacement kit (to suit) Regulator/flow meter(s) (co2 or mitures Argon/ Oxygen, Argon/ CO2) Gas cylinders (as needed)	GTAW Equipment (Minimum rating—AC/DC—constant current (CC)) High frequency control (optional) Gas purge control (optional) Remote control (optional) Water circulation and control (optional) Torch accessory kit (to suit) Work piece lead Part repair/replacement kit (to suit) Flow meter(s) (argon, helium service) Gas cylinders (as needed) Tungsten grinder <input type="checkbox"/>
Power Tools 4 inch, 4 ½ inch, or 5 inch right angle grinder 7 inch or 9 inch right angle grinder Hand drill	Shop Equipment Shear 1/8" capacity Ironworker Pedestal grinder Band saw Drill press Cage, cylinder storage Tool room, secure storage Work bench Bench vise
Welding Inspection Tools Weld coupon bend tester Visual inspection tools (fillet weld gauge) Protractor	