

## Technical Specifications

### Scope of Work:

This specification covers the requirements of the supply of Collaborative Robotic Welder to Snoqualmie Valley School District [District]. Including size, make, supply, unloading, installation and testing, at the District as per technical specifications given and meeting the standards of inspection and performance as agreed to during placement of order. The technical requirements given here are only indicative and not descriptive and the supplier shall ensure that the equipment supplied are complete in all respects to serve the purpose. The District reserves the right to reject proposals which are incomplete; and has the right to waive informalities. The District will review any substitutions and/or alternatives but has the right to reject and/or accept. The equipment shall be new and unused.

### Equipment:

Equipment should be made out of standard materials that meet or exceed all code requirements. All technical requirements listed below are as listed as a minimum and/or equal.

#### Mechanical Specs:

##### Controller Cabinet

- Six Axis Collaborative Robot Arm
- Teach Pendant
- Maximum Payload: 5 kg
- Robot Reach: 850 mm
- Robot Weight: 46 lbs
- Robot Manufacturers Warranty: minimum of 2 Years
- Robot Input Power: 110VAC, single-phased, fused at 15A

##### Additional Requirements:

- Localized storage of robot calibration without the need for battery backup system
- Display Port in controller cabinet for screen mirroring of teach pendant
- Operates as standalone system without requiring internet connectivity

##### Process Equipment Specifications:

##### Input Power Requirements:

Voltage: Auto Tapping for 208VAC to 575VAC

Phase: Auto Tapping for Single Phase or Three Phase

- Rated Output: 350A @ 34VDC, 60% duty cycle (on 3ph power)
- Output Types:
- Constant Voltage (CV)

- Basic Pulse
- Additional Requirements:
- Includes all control components and cables for control by cobot
- Includes wire feeder with four drive rolls
- Recommended for welding 0.035" steel wire

#### Torch/Welding Gun Specifications:

- Air Cooled Welding Torch with:
- Duty Cycle CO2: 400A, 100% duty cycle
- Duty Cycle Argon (and Argon Mix): 260A, 100% duty cycle
- Collet Style Contact Tip
- Two Piece Nozzle
- Made in the USA
- Includes mount bracket and Freedrive pushbutton
- Effective angle is 45 deg with torch bracket

#### Deployment Specifications:

- Work Surface Dimensions: 30"x 48" modular tooling surface with 5/8" holes in 2" grid pattern
- Approximate Overall Footprint: 3ft x 6ft
- Additional Requirements:
- System and all equipment is fully packaged on mobile cart
- Includes black nitride or similar spatter resistant, conductive coating of work surface
- Does not use painted work surface
- Includes electrically isolating base plate that bolts to work surface
- Includes four leveling feet to prevent sway of cart while welding
- Includes four caster wheels for relocation of cart
- Includes fixturing kit for use with modular table top; minimum of 60 fixturing pieces

#### Feature Specifications for Welding Systems:

- Baseline software package to include:
- Simple interface with supplementary images such that no programming background of the operator is needed
- Weld templates that store weld settings for common weld sizes
- Weaving capabilities to improve weld tie-ins
- Premium software package shall be included with the following tools to make programming faster:
- Stitch welding feature to allow for rapid programming of stitch welds
- Pattern tool to linearly shift sections of programs and/or welds to quickly program parts with repeated elements
- Tack tool to allow for single point tack welding
- Force based touch sensing with offsetting capabilities to manage inconsistencies in parts or fixturing

Additional Requirements:

- Software package shall not require maintenance fees or recurring licensing charges
- Touch sensing shall not utilize a wire or nozzle search that requires a probing current to locate parts or fixturing

Additional Requirements:

- Includes supplementary training materials presented in virtual training website
- Includes unlimited lifetime access to virtual training website for students and faculty
- Includes complementary curriculum advising
- Includes local support/repair technician

Spare parts shall be:

- Stocked in North America
- Available for purchase via online store

Vendors to provide detailed specifications of the equipment proposed. To include shipping, installation, supplies and testing. Software proposed and other software compatibility. Software licensing information for evaluation as well as future budgeting; terms of the software and how many seats/licenses and how they are distributed (enterprise or by person).

All equipment to arrive and be installed on or before August 31, 2024