Salient Characteristics

Commercial Availability Certification:
I have evaluated the commercial marketplace and determined that all of the salient characteristics documented below are available in products/services offered in the commercial marketplace.

Signature (typed name): [redacted]____
Technical Point of Contact (TPOC)

The Government requires one (1) commercial multi-task milling/turning center meeting the following minimum salient characteristics:

-
- The contractor shall provide a commercial multi-task milling/turning center designed for heavy and interrupted cutting operations while maintaining long-term machining accuracy and superior surface finishes.
- Shall include a CNC control system capable of simultaneous multi-axis machining with conversational programming, graphical interface, and networking capabilities.
- Shall be capable of turning, milling, drilling, and rigid tapping.
- Shall include linear scale feedback (glass scales or equivalent) on the X1, Y1, and Z1 axes.
- Shall have a minimum swing over bed of 635 mm.
- Shall have a minimum bar capacity of 67 mm.
- Shall accommodate workpieces with a turning diameter ranging from 1 mm to at least 520 mm.
- Shall be capable of machining workpieces at least 1,100 mm in length.
- Shall include dual opposed spindles capable of complete part transfer and machining.
- Shall have a maximum spindle speed of at least 5,000 RPM, with a minimum spindle power of 25 HP and minimum torque of 240 ft-lb.
- Shall include a programmable C-axis with positioning accuracy of 0.001 degree or better and rapid indexing of at least 200 RPM.
- Shall include a milling spindle with a minimum power of 25 HP, a maximum speed of at least 12,000 RPM, and minimum torque of 42 ft-lb.
- Shall include a programmable B-axis with a minimum rotational travel of 240 degrees and positioning increments of 0.0001 degree or better.
- Shall have a minimum X-axis travel of 750 mm with a rapid traverse rate of at least 36 m/min.
- Shall have a minimum Z-axis travel of 1,150 mm with a rapid traverse rate of at least 36 m/min.
- Shall have a minimum Y-axis travel of 230 mm with a rapid traverse rate of at least 36 m/min.
- Shall provide axis thrust sufficient to support heavy-duty machining operations equivalent to a minimum continuous thrust of 9,421 N and intermittent thrust of 14,132 N on the linear axes.

- Shall include an automatic tool changer with a minimum capacity of 60 tools and a maximum tool change time of 1.7 seconds.
- Shall accommodate tooling up to 75 mm in diameter, 300 mm in length, and 8 kg in weight.
- Shall include a high-pressure coolant system capable of delivering a minimum of 20 bar to the cutting tool.
- Shall fit within a maximum machine footprint of 4,615 mm (L) × 2,285 mm (W) × 2,630 mm (H).
- Shall operate on 205-235 VAC, three-phase, 60 Hz electrical service and draw no more than 175 amps at 220 VAC.
- Shall have positioning accuracy and repeatability no greater than:
- B-axis positioning accuracy: 0.0067 degree
- B-axis repeatability: 0.0045 degree
- C-axis positioning accuracy: 0.0067 degree
- C-axis repeatability: 0.0045 degree
- X-axis positioning accuracy: 0.013 mm
- X-axis repeatability: 0.008 mm
- Y-axis positioning accuracy: 0.011 mm
- Y-axis repeatability: 0.006 mm
- Z-axis positioning accuracy: 0.016 mm
- Z-axis repeatability: 0.009 mm
- Shall include a hydraulic steady-rest system capable of supporting workpieces from 2.56 inches to 9.25 inches in diameter.
- Shall accept industry-standard Capto C6 or equivalent modular tooling.
- Shall include a chip conveyor with an integral coolant recovery system.
- Shall include a high-pressure coolant system capable of providing a minimum of 1,000 psi, a coolant reservoir of at least 42 gallons, variable flow between 2 and 10 GPM, and filtration of 10 microns or finer.
- Shall include a coolant chiller with a minimum capacity of 34,000 BTU.
- Shall include a mist collection system.
- Shall include an integrated workpiece probing system compatible with the machine's tooling system.
- Shall include climate control for the electrical cabinet with a minimum cooling capacity of 2,000 BTU.
- Shall include hydraulic workholding on both the main and secondary spindles.
- Shall include an automatic air-blast system for chuck cleaning.
- Shall include all machine controls and software required for full operation.
- Shall include operator training at the Government installation.
- Shall include freight, delivery, rigging, offloading, installation, anchoring, leveling, grouting, final leveling, machine startup, and commissioning.
- Shall include a minimum one-year warranty covering labor and a minimum two-year warranty covering the CNC control system.
- Shall include shipping and delivery to DEVCOM Army Research Laboratory, Aberdeen Proving Ground, Maryland 21005.

Contracting Officer:

8/5/2026 X Eddie Kemp
Contracting Officer (KO) Signed by: KEMP.EDDIE.LEE.II.1122650371