

REQUEST FOR EXPRESSION OF INTEREST PROVISION OF CNC MACHINES (A100999)

1. INTRODUCTION

ASC is seeking information on replacement workshop equipment and request expressions of interest (EOI) for the supply, install and maintenance of a suitable solution.

2. SCOPE OF WORK

ASC is seeking Expressions of Interests (EOI) for the provision of the below equipment to be supplied to either ASC's South Australian or Western Australian sites:

- 5-Axis Multitasking Mill;
- Vertical Milling Machine;
- 5-Axis Multitasking Lathe;
- CNC Lathe with XY Milling;
- Short Bed CNC Lathe with XY Milling; and
- Tooling, Jigs and Fixtures Requirements.

The technical requirements are detailed in Appendix A to this EOI.

3. EOI SUBMISSION REQUIREMENTS

All interested companies must submit a detailed description of their capabilities, including:

- The company's trading name, website, ABN, number of employees and annual turnover;
- The company's capacity and capability to provide the scope of work (as detailed in Appendix A – Technical Requirements);
- The details of other projects in which the company supplied similar scope;
- What State/s the company has these capabilities in;
- Any other competitive discriminators the company has that are not covered above; and
- The company's point of contact in respect of the submitted EOI.

In addition to the above, the interested companies are requested to answer the questions in section 4 below.

4. SUPPLIER EVALUATION

4.1 The following **mandatory questions** are designed to inform which suppliers should be brought into the next stage of the procurement process for the CNC Machines. The supplier must answer these questions positively to progress in the process.

- a. Does the supplier have experience in supplying the listed equipment?
- b. Can the supplier supply all listed equipment?
- c. Does the supplier have sufficient technical capability to support installation and maintenance of the equipment
- d. What is the standard warranty terms for the supply of the listed equipment

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e. What is the lead time for each piece of equipment specified?

4.2 The following questions are **non-mandatory** and are designed to inform comparisons between competing suppliers.

- a. Does the supplier have suitable Off-the-Shelf (OTS) equipment that meets the specifications listed above?
- b. Can the supplier supply indicative specifications or data sheets for the equipment?
- c. Can the supplier provide local support?
- d. Can the supplier elaborate on their quality control procedures?
- e. Does the supplier have any signature, or other performance advantages compared to other vendors?
- f. Does the supplier have any in-service evidence to support the reliability and or performance of their recommended equipment?

Following review of EOIs, ASC intends to request proposal(s) from the shortlisted companies.

Registrations close 4pm (ACST) Friday 5 May 2023.

All EOI submissions shall be submitted via the Industry Capability Network website.

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Appendix A to EOI A100999

PROVISION OF CNC MACHINES

Technical Requirements

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1. Introduction

ASC is seeking information on replacement workshop equipment and request expressions of interest (EOI) for the supply, install and maintenance of suitable solutions. The equipment required is as below:

- **5-Axis Multitasking Mill;**
- **Vertical Milling Machine;**
- **5-Axis Multitasking Lathe;**
- **CNC Lathe with XY Milling;**
- **Short Bed CNC Lathe with XY Milling; and**
- **Tooling, Jigs and Fixtures Requirements.**



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2. General Requirements

The Vendor shall supply, install and commission new CNC milling machines, CNC Lathes, jigs, fixtures and tooling as defined in the machine Specifications.

The scope of work for the contractor includes the supply and installation of the below:

- **5-Axis Multitasking Mill;**
- **Vertical Milling Machine;**
- **5-Axis Multitasking Lathe;**
- **CNC Lathe with XY Milling;**
- **Short Bed CNC Lathe with XY Milling; and**
- **Tooling, Jigs and Fixtures Requirements.**

3. Machine Specifications

5-Axis Multitasking Mill

- Simultaneous 5-Axis Multitasking machine
- Minimum Machine Travels (X, Y, Z) 1,500mm x 1,200mm x 1,000mm
- Turning capability through table
- Pallet Changer – Optional Extra
- Collision detection system
- Inbuilt machine and control system cooling
- Machine 3-Axis positioning accuracy 8µm
- 3T minimum, max work piece weight capacity
- HSK-A100 or similar Spindle
- High Torque Spindle for machining of Steel, Stainless Steel, Inconel, SMO, copper nickel, pre-hardened plate, aluminium, etc.

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- Machine ability to measure milling tool spindle axis rotation
- 60 tool tool-changer minimum
- 25kg minimum tool weight capacity in tool changer
- Provide options for rapid traverse
- Gear Hobbing, cutting and skiving
- Keyway broaching
- High pressure through spindle coolant, provide details on Pressure, Flow Rate Coolant Tank Capacity.
- Coolant spray gun
- Coolant filtration system
- Ventilation to remove coolant misting
- Chip Conveyor
- USB and Ethernet connectivity
- Automatic Thermal Compensation
- Tool Measuring Probe
- Part Positioning Probe
- Electronic Hand Wheel
- Camera for visibility of machining inside of components
- Centralised automatic lubrication system

Vertical Milling Machine

- Vertical Milling Machine
- Minimum Machine Travels (X, Y, Z) 1,400mm x 600mm x 500mm
- Collision detection system
- Removable & Programmable Rotary Table with centre (4th Axis)
- Inbuilt machine and control system cooling
- Machine 3-Axis positioning accuracy 5µm
- 1750kg minimum, max work piece weight capacity
- HSK-A100 or similar Spindle

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- High Torque Spindle for machining of Steel, Stainless Steel, Inconel, SMO, copper nickel, pre-hardened plate, aluminium, etc.
- Machine ability to measure milling tool spindle axis rotation
- 60 tool tool-changer minimum
- 8kg minimum tool weight capacity in tool changer
- Provide options for rapid traverse
- High pressure through spindle coolant, provide details on Pressure, Flow Rate Coolant Tank Capacity.
- Coolant spray gun
- Coolant filtration system
- Ventilation to remove coolant misting
- Chip Conveyor
- USB and Ethernet connectivity
- Automatic Thermal Compensation
- Tool Measuring Probe
- Part Positioning Probe
- Electronic Hand Wheel
- Centralised automatic lubrication system

5-Axis Multitasking Lathe

- Simultaneous 5-Axis Multitasking machine
- Dual Spindle with programmable tail stock
- Minimum Machine Travels (X, Y, Z) 600mm x 250mm x 2,000mm
- 600mm Minimum Max machining diameter
- 12" Main Spindle Chuck
- 10" Secondary Spindle Chuck
- 102mm through bore spindle
- Integrated travelling steady
- Integrated bar loader for up to 100mm bar

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- Collision detection system
- Inbuilt machine and control system cooling
- Machine 3-Axis positioning accuracy 8µm
- HSK-A63 or similar milling Spindle
- High Torque Spindles for machining of Steel, Stainless Steel, Inconel, SMO, copper nickel, pre-hardened plate, aluminium, etc.
- 60 tool tool-changer minimum
- 8kg minimum tool weight capacity in tool changer
- Provide options for rapid traverse
- Gear Hobbing, cutting and skiving
- Keyway broaching
- High pressure through spindle coolant, provide details on Pressure, Flow Rate Coolant Tank Capacity.
- Coolant spray gun
- Coolant filtration system
- Ventilation to remove coolant misting
- Chip Conveyor
- USB and Ethernet connectivity
- Automatic Thermal Compensation
- Tool Measuring Probe
- Part Positioning Probe
- Parts catcher options
- Electronic Hand Wheel
- Centralised automatic lubrication system

CNC Lathe with XY Milling

- Dual Spindle Lathe with XY milling capability
- Dual Spindle with programmable tail stock
- Minimum Machine Travels (X, Y, Z) 260mm x 100mm x 1,000mm
- 420mm Minimum Max machining diameter
- 10” Main Spindle Chuck
- 8” Secondary Spindle Chuck
- 80mm through bore spindle
- Integrated bar loader for up to 80mm bar
- Collision detection system
- Inbuilt machine and control system cooling
- High Torque Spindles for machining of Steel, Stainless Steel, Inconel, SMO, copper nickel, pre-hardened plate, aluminium, etc.
- 12 tool tool-changer minimum
- Provide options for rapid traverse
- High pressure through spindle coolant, provide details on Pressure, Flow Rate Coolant Tank Capacity.
- Coolant spray gun
- Coolant filtration system
- Ventilation to remove coolant misting
- Chip Conveyor
- USB and Ethernet connectivity
- Automatic Thermal Compensation
- Tool Measuring Probe
- Part Positioning Probe
- Parts catcher options
- Electronic Hand Wheel
- Centralised automatic lubrication system

1. Short Bed CNC Lathe with XY Milling

- Dual Spindle Lathe with XY milling capability
- Dual Spindle with programmable tail stock
- Minimum Machine Travels (X, Y, Z) 260mm x 100mm x 500mm
- 420mm Minimum Max machining diameter
- 10” Main Spindle Chuck
- 8” Secondary Spindle Chuck
- 80mm through bore spindle
- Integrated bar loader for up to 80mm bar
- Collision detection system
- Inbuilt machine and control system cooling
- High Torque Spindles for machining of Steel, Stainless Steel, Inconel, SMO, copper nickel, pre-hardened plate, aluminium, etc.
- 12 tool tool-changer minimum
- Provide options for rapid traverse
- High pressure through spindle coolant, provide details on Pressure, Flow Rate Coolant Tank Capacity.
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- Parts catcher options
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4. Tools, Jigs and Fixtures Requirements

- Tool holders, Shrink fit chucks, drill chucks, etc.
- Milling cutters to suit all operations including, shoulder and edge milling tools, face milling tools, profiling tools, groove milling tools, thread milling tools, solid carbide tools, chamfering tools, tipped and solid carbide drills, reamers, taps etc.
- Turning tools to suit all operations including internal and external machining, parting off, internal and external grooving, face grooving, profiling tools, thread turning, drilling tools etc.
- Gear cutting and skiving tools
- Range of roughing and finishing boring heads and bars to suit boring of diameters 16mm to 500mm
- Work holding jigs and fixtures, clamps, vices etc.
- Angle plates fixed and adjustable
- 3 and 4 jaw self centering chucks 4 lathe
- 4 Jaw independent chuck for lathe
- Tool pre-setter

5. Equipment Support

- Local Maintenance support
- Onsite basic maintenance training
- Preventative maintenance schedules and requirements
- Programming and operator training
- Site Acceptance Testing
- Factory Acceptance Test
- Commissioning
- Documentation to support design and build including cad models, pit details etc. are to be provided.
- Services demand estimates, equipment weights and support details, any overhead crane requirements, pneumatic requirements are to be provided.
- Detailed risk assessment of the equipment to be conducted with ASC

6. Australian Standards

All equipment shall comply with all relevant standards, codes and WHSE legislations, including but not limited to,

- AS4024 – Safety of Machinery
- AS3000 – Electrical Wiring
- Working at Heights (If Required)
- Confined Spaces (If Required)
- AS 2671 - Hydraulic fluid power - General requirements for systems
- AS 2788 - Pneumatic fluid power - General requirements for systems