



RETURN BIDS TO:

RETOURNER LES SOUMISSIONS À:

Bid Receiving Public Works and Government
Services Canada/Réception des soumissions
Travaux publics et Services gouvernementaux
Canada

1713 Bedford Row

Halifax, N.S./Halifax, (N.É.)

Halifax

Nova Scotia

B3J 1T3

Bid Fax: (902) 496-5016

REQUEST FOR PROPOSAL

DEMANDE DE PROPOSITION

**Proposal To: Public Works and Government
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Vendor/Firm Name and Address

Raison sociale et adresse du

fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution

Atlantic Region Acquisitions/Région de l'Atlantique
Acquisitions

1713 Bedford Row

Halifax, N.S./Halifax, (N.É.)

Halifax

Nova Scot

B3J 1T3

Title - Sujet 5-Axis Milling Machine	
Solicitation No. - N° de l'invitation W355B-220497/A	Date 2022-07-14
Client Reference No. - N° de référence du client W355B-22-0497	
GETS Reference No. - N° de référence de SEAG PW-\$HAL-411-11549	
File No. - N° de dossier HAL-1-87220 (411)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM Atlantic Daylight Saving Time ADT on - le 2022-08-18 Heure Avancée de l'Atlantique HAA	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Surette, Erin	Buyer Id - Id de l'acheteur hal411
Telephone No. - N° de téléphone (902) 476-5077 ()	FAX No. - N° de FAX (902) 496-5016
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: CPO1 FMF Cape Scott HMC Dockyard Maritime Forcecs Atlantic Door 13, Bldg D-200 HALIFAX Nova Scotia B3K5X5 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée See Herein – Voir ci-inclus	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

THIS DOCUMENT CONTAINS A SECURITY REQUIREMENT

TABLE OF CONTENTS

PART 1 - GENERAL INFORMATION	3
1.1 SECURITY REQUIREMENTS	3
1.2 STATEMENT OF REQUIREMENT	3
1.3 DEBRIEFINGS	3
1.4 CANADA POST CORPORATION'S (CPC) CONNECT SERVICE	3
PART 2 - BIDDER INSTRUCTIONS	4
2.1 STANDARD INSTRUCTIONS, CLAUSES AND CONDITIONS	4
2.2 SUBMISSION OF BIDS	4
2.3 ENQUIRIES - BID SOLICITATION	5
2.4 APPLICABLE LAWS	5
2.5 BID CHALLENGE AND RECOURSE MECHANISMS	5
PART 3 - BID PREPARATION INSTRUCTIONS	6
3.1 BID PREPARATION INSTRUCTIONS	6
PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION	8
4.1 EVALUATION PROCEDURES	8
4.2 BASIS OF SELECTION - MANDATORY TECHNICAL CRITERIA	8
PART 5 - CERTIFICATIONS AND ADDITIONAL INFORMATION	9
5.1 CERTIFICATIONS REQUIRED WITH THE BID	9
5.2 CERTIFICATIONS PRECEDENT TO CONTRACT AWARD AND ADDITIONAL INFORMATION	9
PART 6 - RESULTING CONTRACT CLAUSES	10
6.1 SECURITY REQUIREMENTS	10
6.2 STATEMENT OF REQUIREMENT	10
6.3 STANDARD CLAUSES AND CONDITIONS	10
6.4 TERM OF CONTRACT	10
6.5 AUTHORITIES	11
6.6 PAYMENT	12
6.7 INVOICING INSTRUCTIONS	13
6.8 SACC MANUAL CLAUSES	13
6.9 SUPPLEMENTAL GENERAL CONDITIONS	13
6.10 COMPLIANCE WITH ON-SITE MEASURES, STANDING ORDERS, POLICIES, AND RULES	14
6.11 CERTIFICATIONS AND ADDITIONAL INFORMATION	14
6.12 APPLICABLE LAWS	14
6.13 PRIORITY OF DOCUMENTS	14
6.14 DISPUTE RESOLUTION	14
6.15 INSPECTION AND ACCEPTANCE	15
6.16 OPTIONAL GOODS AND/OR SERVICES	15
ANNEX A	16
STATEMENT OF REQUIREMENT	16
ANNEX B	26

Solicitation No. - N° de l'invitation
W355B-220497/A
Client Ref. No. - N° de réf. du client
W355B-220497

Amd. No. - N° de la modif.
File No. - N° du dossier

Buyer ID - Id de l'acheteur
HAL411
CCC No./N° CCC - FMS No./N° VME

BASIS OF PAYMENT	26
ANNEX C	28
SECURITY REQUIREMENTS.....	28
ANNEX D	32
MANDATORY TECHNICAL EVALUATION	32
ANNEX E TO PART 3 OF THE BID SOLICITATION	39
ELECTRONIC PAYMENT INSTRUMENTS.....	39
ANNEX F.....	40
INTEGRITY PROVISIONS – LIST OF DIRECTORS	40

PART 1 - GENERAL INFORMATION

1.1 Security Requirements

1. Before award of a contract, the following conditions must be met:
 - (a) the Bidder must hold a valid organization security clearance as indicated in Part 6 - Resulting Contract Clauses;
 - (b) the Bidder's proposed individuals requiring access to classified or protected information, assets or sensitive work sites must meet the security requirements as indicated in Part 6 - Resulting Contract Clauses;
 - (c) the Bidder must provide the name of all individuals who will require access to classified or protected information, assets or sensitive work sites;
2. Bidders are reminded to obtain the required security clearance promptly. Any delay in the award of a contract to allow the successful Bidder to obtain the required clearance will be at the entire discretion of the Contracting Authority.
3. For additional information on security requirements, Bidders should refer to the [Contract Security Program](http://www.tpsgc-pwgsc.gc.ca/esc-src/introduction-eng.html) of Public Works and Government Services Canada (<http://www.tpsgc-pwgsc.gc.ca/esc-src/introduction-eng.html>) website.

1.2 Statement of Requirement

Public Works and Government Services Canada (PWGSC) on behalf of The Department of National Defence (DND), Fleet Maintenance Facility Cape Scott (FMF CS) has a requirement for the supply of one (1) 5 Axis Milling Machine. FMF CS will require delivery, installation, commissioning, and training.

1.3 Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

1.4 Canada Post Corporation's (CPC) Connect service

This bid solicitation allows bidders to use the CPC Connect service provided by Canada Post Corporation to transmit their bid electronically. Bidders must refer to Part 2 entitled Bidder Instructions, and Part 3 entitled Bid Preparation Instructions, of the bid solicitation, for further information.

PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The [2003](#) (2022-03-29) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of [2003](#), Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: 60 days

Insert: 90 days

2.1.1 SACC Manual Clauses

SACC Manual Clause [B3000T](#) (2006-06-16), Equivalent Products

2.2 Submission of Bids

Bids must be submitted only to the Public Works and Government Services Canada (PWGSC) Bid Receiving Unit specified below by the date and time indicated on page 1 of the bid solicitation:

Bid Receiving
Public Works and Government Services Canada
1713 Bedford Row
Halifax, N.S.
B3J 1T3

Email for CPC Connect Service:

TPSGC.RARceptionSoumissionsNE-ARBidReceivingNS.PWGSC@tpsgc-pwgsc.gc.ca

Note: Bids will not be accepted if emailed directly to this email address. This email address is to be used to open a CPC Connect conversation, as detailed in Standard Instructions [2003](#), or to send bids through a CPC Connect message if the bidder is using its own licensing agreement for CPC Connect service.

Facsimile number: (902) 496-5016

2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than **seven (7) calendar days** before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

2.4 Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Nova Scotia.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidders.

2.5 Bid Challenge and Recourse Mechanisms

- (a) Several mechanisms are available to potential suppliers to challenge aspects of the procurement process up to and including contract award.
- (b) Canada encourages suppliers to first bring their concerns to the attention of the Contracting Authority. Canada's [Buy and Sell](#) website, under the heading "[Bid Challenge and Recourse Mechanisms](#)" contains information on potential complaint bodies such as:
 - Office of the Procurement Ombudsman (OPO)
 - Canadian International Trade Tribunal (CITT)
- (c) Suppliers should note that there are **strict deadlines** for filing complaints, and the time periods vary depending on the complaint body in question. Suppliers should therefore act quickly when they want to challenge any aspect of the procurement process.

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

- If the Bidder chooses to submit its bid electronically, Canada requests that the Bidder submits its bid in accordance with section 08 of the 2003 standard instructions. The epost Connect system has a limit of 1GB per single message posted and a limit of 20GB per conversation.

The bid must be gathered per section and separated as follows:

Section I: Technical Bid
Section II: Financial Bid
Section III: Certifications
Section IV: Additional Information

- If the Bidder chooses to submit its bid in hard copies, Canada requests that the Bidder submits its bid in separately bound sections as follows:

Section I: Technical Bid (1 hard copy)
Section II: Financial Bid (1 hard copy)
Section III: Certifications (1 hard copy)
Section IV: Additional Information (1 hard copy)

If there is a discrepancy between the wording of the soft copy on electronic media and the hard copy, the wording of the hard copy will have priority over the wording of the soft copy.

- If the Bidder is simultaneously providing copies of its bid using multiple acceptable delivery methods, and if there is a discrepancy between the wording of any of these copies and the electronic copy provided through CPC Connect service, the wording of the electronic copy provided through CPC Connect service will have priority over the wording of the other copies.

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Canada requests that bidders follow the format instructions described below in the preparation of hard copy of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32573) (<https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32573>). To assist Canada in reaching its objectives, bidders should:

- 1) Include all environmental certification(s) relevant to your organization (e.g. ISO 14001, Leadership in Energy and Environmental Design (LEED), Carbon Disclosure Project, etc.)
- 2) Include all environmental certification(s) or Environmental Product Declaration(s) (EPD) specific to your product/service (e.g. Forest Stewardship Council (FSC), ENERGYSTAR, etc.)
- 3) Unless otherwise noted, bidders are encouraged to submit bids electronically. If hard copies are required, bidders should:

-
- a. use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
 - b. use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

Section I: Technical Bid

In their technical bid, Bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment.

3.1.1 Electronic Payment of Invoices – Bid

If you are willing to accept payment of invoices by Electronic Payment Instruments, complete Annex E Electronic Payment Instruments, to identify which ones are accepted.

If Annex E Electronic Payment Instruments is not completed, it will be considered as if Electronic Payment Instruments are not being accepted for payment of invoices.

Acceptance of Electronic Payment Instruments will not be considered as an evaluation criterion.

3.1.2 Exchange Rate Fluctuation

SACC Manual Clause [C3011T](#) (2013-11-06), Exchange Rate Fluctuation

3.1.3 SACC Manual Clauses

Section III: Certifications

Bidders must submit the certifications and additional information required under Part 5.

Section V: Additional Information

- 3.1.3** The Company Security Officer must ensure through the [Contract Security Program](#) that the Contractor and individuals hold a valid security clearance at the required level, as indicated in Part 1, clause 1.1, Security Requirements.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

4.1.1 Technical Evaluation

Bidders must clearly demonstrate compliance with each mandatory technical criteria. Failure to demonstrate compliance will result in the bid being deemed non-responsive, and be given no further consideration.

The Crown is under NO obligation to seek clarification of any information contained within the bid(s) or the supporting technical documentation provided.

4.1.2 Financial Evaluation

SACC Manual Clause [A0222T](#) (2014-06-26), Evaluation of Price- Canadian / Foreign Bidders

4.2 Basis of Selection - Mandatory Technical Criteria

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical criteria to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

5.1 Certifications Required with the Bid

Bidders must submit the following duly completed certifications as part of their bid.

5.1.1 Integrity Provisions - Declaration of Convicted Offences

In accordance with the Integrity Provisions of the Standard Instructions, all bidders must provide with their bid, **if applicable**, the declaration form available on the [Forms for the Integrity Regime](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>), to be given further consideration in the procurement process.

5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the bid non-responsive.

5.2.1 Integrity Provisions – Required Documentation

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real property agreement of the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

5.2.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the [Employment and Social Development Canada \(ESDC\) - Labour's](https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#) website (<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#>).

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

PART 6 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

6.1 Security Requirements

6.1.1 The following security requirements (SRCL and related clauses provided by the Contract Security Program) apply and form part of the Contract.

6.1.2 The Company Security Officer must ensure through the [Contract Security Program](#) that the Contractor and individuals hold a valid security clearance at the required level of document safeguarding capability.

6.2 Statement of Requirement

The Contractor must provide the items detailed under the "Requirement" at Annex A.

6.3 Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](#) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

6.3.1 General Conditions

[2010A](#) (2022-01-28), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

6.4 Term of Contract

The Contractor grants to Canada the irrevocable option to extend the term of the Contract by up to one (1) additional one (1) year period(s) under the same conditions. The Contractor agrees that, during the extended period of the Contract, it will be paid in accordance with the applicable provisions as set out in the Basis of Payment.

6.4.1 Optional Goods and/or Services

The Contractor grants to Canada the irrevocable option to acquire the goods described at Annex A of the Contract under the same conditions and at the prices and/or rates stated in Contract Annex C. The option may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment.

The Contracting Authority may exercise the option within 12 months after receipt by sending a written notice to the Contractor at least 90 calendar days before the expiry date of the Contract. The option may only be exercised by the Contracting Authority, and will be evidenced for administrative purposes only, through a contract amendment.

6.4.2 Period of the Contract

The period of the Contract is from date of Contract to March 31, 2023 inclusive.

6.4.3 Best Delivery Date - Bid

While delivery, installation, and training is required no later than 31 March 2023, the best delivery that could be offered is _____ weeks from receipt of contract.

6.4.5 Delivery Points

Delivery of the requirement will be made to delivery point(s) specified at Annex "A" of the Contract.

6.5 Authorities

6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Erin Surette
Title: Supply Specialist
Public Works and Government Services Canada
Acquisitions Branch
Address: 1713 Bedford Row, Halifax, NS B3J 1T3

Telephone: 902-476-5077
Facsimile: 902-496-5016
E-mail address: erin.surette@tpsgc-pwgsc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

6.5.2 Project Authority

The Project Authority for the Contract is to be provided at award.

Name:
Title:
Organization:
Address:

Telephone:
Facsimile:
E-mail address:

The Project Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Project Authority, however the

Project Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

6.5.3 Contractor's Representative (to be filled out)

Name:
Title:
Organization:
Address:

Telephone:
Facsimile:
E-mail address:

6.6 Payment

6.6.1 Basis of Payment - Firm Price, Firm Unit Price(s) or Firm Lot Price(s)

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm price, as specified in Annex C of the awarded Contract for a cost of \$_____ (will be completed at contract award). Customs duties are included, and applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

6.6.2 Single Payment

SACC Manual Clause H1000C (2008-05-12), **Single Payment**

6.6.3 Evaluation of Price Bid

1. The price of the bid will be evaluated as follows:
 - a. Canadian-based bidders must submit firm prices, Canadian customs duties and excise taxes included, and Applicable Taxes excluded.
 - b. foreign-based bidders must submit firm prices, Canadian customs duties, excise taxes and Applicable Taxes excluded. Canadian customs duties and excise taxes payable by Canada will be added, for evaluation purposes only, to the prices submitted by foreign-based bidders.
2. Unless the bid solicitation specifically requires bids to be submitted in Canadian currency, bids submitted in foreign currency will be converted to Canadian currency for evaluation purposes. The rate given by the Bank of Canada in effect on the bid solicitation closing date, or on another date specified in the bid solicitation, will be applied as a conversion factor to the bids submitted in foreign currency.
3. Although Canada reserves the right to award the Contract either on an FOB plant or FOB destination, Canada requests that bidders provide prices FOB their plant or shipping point and FOB destination. Bids will be assessed on an FOB destination basis.

4. For the purpose of the bid solicitation, bidders with an address in Canada are considered Canadian-based bidders and bidders with an address outside of Canada are considered foreign-based bidders.

6.7.4 Taxes – Foreign-based contractor

Unless specified otherwise in the Contract, the price includes no amount for any federal excise tax, state or local sales or use tax, or any other tax of a similar nature, or any Canadian tax whatsoever. The price, however, includes all other taxes. If the Work is normally subject to federal excise tax, Canada will, upon request, provide the Contractor a certificate of exemption from such federal excise tax in the form prescribed by the federal regulations.

Canada will provide the Contractor evidence of export that may be requested by the tax authorities. If, as a result of Canada's failure to do so, the Contractor has to pay federal excise tax, Canada will reimburse the Contractor if the Contractor takes such steps as Canada may require to recover any payment made by the Contractor. The Contractor must refund to Canada any amount so recovered.

6.6.5 Electronic Payment of Invoices – Contract

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s):

- a. Visa Acquisition Card;
- b. MasterCard Acquisition Card;
- c. Direct Deposit (Domestic and International);
- d. Electronic Data Interchange (EDI);
- e. Wire Transfer (International Only);

6.7 Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.
2. Invoices must be distributed as follows:
 - a. The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.

6.8 SACC Manual Clauses

- a. SACC Manual clause [A9062C](#) (2011-05-16), Canadian Forces Site Regulations
- b. SACC Manual clause [B7500C](#) (2006-06-16), Excess Goods
- c. SACC Manual clause [A9006C](#) (2012-07-16), Defence Contract
- d. SACC Manual clause [A7035T](#) (2007-05-25), List of Proposed Subcontractors
- e. SACC Manual clause [B1501C](#) (2018-06-21), Electrical Equipment
- f. SACC Manual clause [G1005C](#) (2016-01-28), Insurance - No Specific Requirement
- g. SACC Manual clause [D2000C](#) (2007-11-30), Markings
- h. SACC Manual clause [D2001C](#) (2007-11-30), Labelling
- i. SACC Manual clause [D2025C](#) (2017-08-17), Wood Packing Materials
- j. SACC Manual clause [C2000C](#) (2007-11-30), Taxes- Foreign-based Contractor

6.9 Supplemental General Conditions

- a. [4001](#) (2015-04-01), Hardware Purchase, Lease and Maintenance
- b. [4002](#) (2010-08-16), Software Development or Modification Services
- c. [4003](#) (2010-08-16), Licensed Software

d. **4004** (2013-04-25), Maintenance and Support Services for Licensed Software

6.10 Compliance with on-site measures, standing orders, policies, and rules

The Contractor must comply and ensure that its employees and subcontractors comply with all security measures, standing orders, policies or other rules in force at the site where the Work is performed.

6.11 Certifications and Additional Information

6.11.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

6.12 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____.

6.13 Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement;
- (b) the general conditions **2010A** (2022-01-28) Goods (medium complexity);
- (c) Annex A, Statement of Requirement;
- (d) Annex B, Basis of Payment
- (e) Annex C, Security Requirements
- (f) Annex D, Mandatory Technical Evaluation
- (g) Annex E, Electronic Payment
- (h) Annex F, Integrity Provisions – List of Directors;
- (j) the Contractor's bid dated _____ (will be completed at contract award)

6.14 Dispute Resolution

- (a) The parties agree to maintain open and honest communication about the Work throughout and after the performance of the contract.
- (b) The parties agree to consult and co-operate with each other in the furtherance of the contract and promptly notify the other party or parties and attempt to resolve problems or differences that may arise.
- (c) If the parties cannot resolve a dispute through consultation and cooperation, the parties agree to consult a neutral third party offering alternative dispute resolution services to attempt to address the dispute.
- (d) Options of alternative dispute resolution services can be found on Canada's Buy and Sell website under the heading "**Dispute Resolution**".

6.15 Inspection and Acceptance

The Project Authority is the Inspection Authority. All reports, deliverable items, documents, goods and all services rendered under the Contract are subject to inspection by the Inspection Authority or representative. Should any report, document, good or service not be in accordance with the requirements of the Statement of Work and to the satisfaction of the Inspection Authority, as submitted, the Inspection Authority will have the right to reject it or require its correction at the sole expense of the Contractor before recommending payment.

6.16 Optional Goods and/or Services

The Contractor grants to Canada the irrevocable option to acquire the goods, services or both described at Annex A of the Contract under the same conditions and at the prices and/or rates stated in the Contract. The option may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment.

The Contracting Authority may exercise the option at any time before September 30, 2023 by sending a written notice to the Contractor.

ANNEX A

STATEMENT OF REQUIREMENT

1. GENERAL DESCRIPTION

1.1. The Department of National Defence (DND), Fleet Maintenance Facility Cape Scott (FMF CS) has a requirement for the supply of one (1) 5 Axis Milling Machine. FMF CS will require delivery, installation, commissioning, and training.

1.2. Suggested Manufacturer and Model:

1.2.1. Matsuura MX-850 (Equivalents will be accepted/considered)

2. CNC 5-Axis Mill General Features

2.1. Movement & Ranges

- 2.1.1. X-axis minimum 900mm
- 2.1.2. Y-axis minimum 780mm
- 2.1.3. Z-axis minimum 650mm
- 2.1.4. A-axis (trunnion pivot axis) range -125° to +30°
- 2.1.5. C-axis (table rotation axis) 360°
- 2.1.6. Table surface to spindle gauge line range 70-720mm
- 2.1.7. A-axis centre to spindle gauge line range 0-650mm
- 2.1.8. A-axis centre to table surface minimum 70mm
- 2.1.9. Table centre to X-zero position minimum 400mm
- 2.1.10. Table centre to Y-axis position minimum 390mm

2.2. Work Table

- 2.2.1. Minimum 700mm table diameter
- 2.2.2. Maximum work load 500kg
- 2.2.3. Maximum work envelope (diameter / height) 760mm x 450mm
- 2.2.4. Maximum work envelope with limitation (diameter / height) 850mm x 450mm
- 2.2.5. Distance from floor to table surface minimum 910mm
- 2.2.6. Table indexing (A / C axis) not more than 0.001° / 0.001°

2.3. Spindle

- 2.3.1. Speed range 40-15000RPM
- 2.3.2. Taper (Big Plus CAT 40) 7/24 taper #40
- 2.3.3. Spindle diameter minimum 80mm
- 2.3.4. Maximum spindle motor power (continuous 35HP / maximum 40HP)
- 2.3.5. Maximum spindle torque (up to 880 RPM) 350Nm
- 2.3.6. Lubrication by grease supply

2.4. Feed Rate

- 2.4.1. Maximum rapid feed rate (X/Y/Z) (metres per minute) 40mpm/40mpm/40mpm
- 2.4.2. Maximum rapid feed rate (A/C axis) minimum 17/33RPM
- 2.4.3. Maximum rapid (acceleration / deceleration) (X/Y/Z) 0.31G/0.31G/0.48G
- 2.4.4. Maximum rapid (acceleration / deceleration) (A/C axis) 865/1200°/second²
- 2.4.5. Cutting feed rate (X/Y/Z) range 1~40,000mm/minute (0.03-1575 inches per minute)
- 2.4.6. Maximum cutting feed rate (A/C axis) 17/33RPM

-
- 2.4.7. Minimum increment (X/Y/Z) 0.001mm
 - 2.4.8. Minimum increment (A/C axis) 0.001°
 - 2.5. Automatic Tool Changer
 - 2.5.1. Minimum number of tools (available for use) 60 chain type
 - 2.5.2. Tool pocket pitch 82.5mm
 - 2.5.3. Maximum tool weight 10kgs
 - 2.5.4. Maximum tool diameter 80mm
 - 2.5.5. Maximum tool length 350mm
 - 2.5.6. Automatic tool change time tool to tool not > 1.5 seconds
 - 2.5.7. Automatic tool change time chip to chip not > 4.75 seconds
 - 2.5.8. Double grip type tool change arm
 - 2.6. General Machine Specification
 - 2.6.1. Ballscrew diameter and pitch (driven axis X/Y/Z) 40mm x 16p
 - 2.6.2. Axis thrust (X/Y/Z) 7.2kn/7.4kn/11.7kn
 - 2.6.3. Feed motor X axis minimum 5.0hp
 - 2.6.4. Feed motor Y axis minimum 5.0hp
 - 2.6.5. Feed motor Z axis minimum 9.0hp
 - 2.6.6. Feed motor A axis minimum 7.0hp
 - 2.6.7. Feed motor C axis minimum 3.0hp
 - 2.6.8. Hydraulic pump motor minimum 3.0hp
 - 2.6.9. Spindle oil cooler motor minimum 0.5hp
 - 2.6.10. Coolant tank capacity minimum 500 litres
 - 2.6.11. Hydraulic tank capacity minimum 20 litres
 - 2.6.12. Spindle oil cooler tank minimum 7 litres
 - 2.6.13. AC servo motors for axis ballscrews (X/Y/Z/A/C)
 - 2.6.14. Position detector using an optical encoder
 - 2.6.15. Ceramic spindle bearings
 - 2.6.16. Direct drive spindle arrangement for headstock
 - 2.6.17. Synchronized tapping capability to a maximum of 4000RPM
 - 2.6.18. Gearless transmission
 - 2.6.19. Central cooling system for spindle and motor
 - 2.6.20. Capable of supporting gear hobbing tools and set up equipment
 - 2.7. Accuracies
 - 2.7.1. Positioning (X/Y/Z axis) not > $\pm 0.0025\text{mm}$
 - 2.7.2. Positioning repeatability (X/Y/Z axis) not > $\pm 0.001\text{mm}$
 - 2.7.3. Positioning for rotating axis (A & C) not > 3 seconds
 - 2.7.4. Repeatability for rotating axis (A & C) not > ± 2 seconds
 - 2.8. Machine Dimensions
 - 2.8.1. Maximum height 3400mm
 - 2.8.2. Maximum width 4300mm
 - 2.8.3. Maximum length or depth 6800mm including maintenance area & chip conveyor
 - 2.8.4. Maximum weight 17000kgs
 - 2.9. Software Control System
 - 2.9.1. Five controlled axis (X/Y/Z/A/C)
 - 2.9.2. Five positioning axis control simultaneously, linear interpolation
 - 2.9.3. Two circular interpolation controlled simultaneously
 - 2.10. Input Commands

-
- 2.10.1. Minimum input increment 0.001mm
 - 2.10.2. Minimum command increment 0.001mm
 - 2.10.3. Maximum programmable dimensions $\pm 99999.0\text{mm}$
 - 2.10.4. Must have metric and imperial unit input capabilities
 - 2.10.5. Must have a buffer register
 - 2.10.6. Must have absolute and incremental programming capabilities
 - 2.10.7. Must have decimal point input
 - 2.11. Interpolation in G code
 - 2.11.1. Positioning
 - 2.11.2. Linear
 - 2.11.3. Circular
 - 2.11.4. Helical
 - 2.12. Feed Specs
 - 2.12.1. Feed rate in mm/minute or inch/minute
 - 2.12.2. Dwell function
 - 2.12.3. Handle feed increments 0.001mm/0.01mm/0.1mm
 - 2.12.4. Manual feed with rapid / jog function
 - 2.12.5. Automatic acceleration & deceleration for both linear and interpolation
 - 2.12.6. Rapid traverse linear
 - 2.12.7. Cutting feed exponential
 - 2.12.8. Rapid traverse override and cancel function
 - 2.12.9. Feed rate override and cancel function
 - 2.13. Program Specifications
 - 2.13.1. Program storage and editing
 - 2.13.2. Delete/insert/alter functions
 - 2.13.3. Program numbering and sequencing
 - 2.13.4. Program search function
 - 2.13.5. Minimum 125 registered programs
 - 2.13.6. Background edit function
 - 2.14. Operator Display
 - 2.14.1. Minimum 15 inch LCD colour touch display with full function keyboard
 - 2.14.2. Minimum display functions: commanded values, offset values, present position, parameters, tool number, and alarms
 - 2.14.3. Other functions displayed: clock, manual data input (MDI), run time, history
 - 2.15. Input/output function/devices
 - 2.15.1. Ethernet and USB ports
 - 2.16. Tool Offset
 - 2.16.1. Tool length offset
 - 2.16.2. Tool position offset
 - 2.16.3. Cutter radius compensation
 - 2.16.4. Minimum number of tool offsets 99
 - 2.17. Coordinate System
 - 2.17.1. Manual reference point return
 - 2.17.2. Manual 2nd reference point return
 - 2.17.3. Automatic reference point return
 - 2.17.4. 2nd reference point return
 - 2.17.5. 3rd & 4th reference point return

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- 2.17.6. Reference point return check
 - 2.17.7. Return from reference point
 - 2.17.8. Automatic coordinate system setting
 - 2.18. Functions for Assisting Operation
 - 2.18.1. Label skip
 - 2.18.2. Single block
 - 2.18.3. Optional stop
 - 2.18.4. Optional block skip
 - 2.18.5. Dry run
 - 2.18.6. Machine lock
 - 2.18.7. Auxiliary function lock
 - 2.18.8. Mirror image
 - 2.18.9. Manual absolute on/off
 - 2.18.10. Z-axis command neglect
 - 2.18.11. Set zero (origin set)
 - 2.18.12. Tool length measurement
 - 2.18.13. Feed hold
 - 2.18.14. Cycle start
 - 2.18.15. Data protection key
 - 2.18.16. Help function / menu
 - 2.19. Functions for Assisting Programming
 - 2.19.1. Circular interpolation by radius
 - 2.19.2. Canned cycle
 - 2.19.3. Subprogram
 - 2.19.4. Exact stop check and mode
 - 2.19.5. Tool offset value program input
 - 2.19.6. Solid (rigid) tapping
 - 2.19.7. Automatic corner deceleration
 - 2.19.8. Look ahead control function
 - 2.19.9. Custom macro B
 - 2.20. Machine Accuracy Compensation
 - 2.20.1. Backlash compensation
 - 2.20.2. Rigid / jog feed rate & backlash compensation
 - 2.20.3. Follow up function
 - 2.20.4. Stored pitch error compensation
 - 2.21. Machine Supporting Functions
 - 2.21.1. Built-in Personal Computer (PC)
 - 2.21.2. Axis interlock
 - 2.21.3. External data input
 - 2.21.4. Detach of controlled axis
 - 2.21.5. Skip function
 - 2.22. Safety / Maintenance
 - 2.22.1. Emergency stop button /function
 - 2.22.2. Stored stroke limit
 - 2.22.3. Self-diagnosis functions
 - 2.22.4. Memory card interface
 - 2.22.5. Stroke check before move

3. CNC 5-Axis Mill Standard Equipment

3.1. Cabinet / Enclosure

- 3.1.1. Total enclosed steel splash guard minimum thickness 2.3mm
- 3.1.2. Door interlocks
- 3.1.3. Work light
- 3.1.4. Rear discharge auger for chip removal
- 3.1.5. Chip flush system support
- 3.1.6. Sealed & dust proof
- 3.1.7. Vibration maximum 0.5G-force
- 3.1.8. Able to operate at up to 45°C and 75% humidity with no condensation
- 3.1.9. Poly-carbonate window material minimum thickness 19mm
- 3.1.10. Noise threshold while running <70dB
- 3.1.11. Enclosure door opening minimum 1000mm
- 3.1.12. Maximum distance from front of machine (operator access) to spindle 110mm
- 3.1.13. Maximum distance from front of machine (operator access) to centre of work table 500mm
- 3.1.14. Maximum distance from floor to table top 920mm
- 3.1.15. Must have a sliding cabinet top to facilitate crane access with minimum opening of 425mm

3.2. Milling Machine

- 3.2.1. Flood coolant system
- 3.2.2. Chip flush system
- 3.2.3. Chip conveyor with rear centre discharge
- 3.2.4. Spindle grease supply system
- 3.2.5. Spindle overload protection
- 3.2.6. Linear scale feedback for X, Y & Z axis
- 3.2.7. 5-axis kinematics setup and adjustment macro
- 3.2.8. Hydraulic unit
- 3.2.9. Intelligent precision contouring function
- 3.2.10. Intelligent protection system with collision avoidance
- 3.2.11. Synchronized tapping function
- 3.2.12. Automatic grease lubrication unit for X, Y&Z linear guideways
- 3.2.13. HMI controls (Human Machine Interface)

3.3. Software Package

- 3.3.1. Interactive programming and graphic display
- 3.3.2. Expanded directory displays
- 3.3.3. Measurement via touch probe
- 3.3.4. Graphic recovery operations
- 3.3.5. Background editing
- 3.3.6. Detailed alarm screen
- 3.3.7. Touch probe with indicator
- 3.3.8. Tool length management & measurement
- 3.3.9. Minimum 8MB control memory
- 3.3.10. Program restart on screen function
- 3.3.11. Tool life management function
- 3.3.12. Multi-step skip function

- 3.3.13. Work coordinate system with minimum 300 sets
- 3.3.14. Coordinate system rotation function
- 3.3.15. Tool offset number addition minimum 999
- 3.3.16. Registered programs minimum 1000 pieces
- 3.3.17. Macro programming with common variable expansion of minimum 500
- 3.3.18. Tool centre point control for 5-axis cutting
- 3.3.19. Tool diameter offset for 5 axis cutting
- 3.3.20. Tilted plane cutting command
- 3.3.21. Rotary table dynamic fixture offset
- 3.3.22. Nano smoothing with jerk control
- 3.3.23. Minimum 1000 block look ahead
- 3.3.24. Must support gear hobbing (software / programming)

4. Required machine options

4.1. Accessories, parts and options

- 4.1.1. All accessories, parts and options must be 100% compatible with each other and the 5-Axis Mill that is specified herein. All equipment, accessories, parts and options shall be new. No used or refurbished goods will be accepted by this facility, FMF Cape Scott.

- 4.1.1.1. High pressure coolant pump at 300PSI with 20 microns filtration
- 4.1.1.2. Fanuc controller with high speed package (most current version)
- 4.1.1.3. 1Gb data server with Ethernet
- 4.1.1.4. Environment thermal compensation
- 4.1.1.5. High volume flushing pump
- 4.1.1.6. Laser tool measurement system with tool breakage system (ie. Renishaw NC-4)
- 4.1.1.7. Optical part probe (ie. Renishaw OMP-40 or equivalent)
- 4.1.1.8. Mastercam 5-axis post processor for 5-axis mill described herein
- 4.1.1.9. Geometric error correction for 5-axis mill
- 4.1.1.10. Gear hobbing capable mechanically (as stated 3.3.24)

- 4.1.2. CAT40 Tooling: all tooling below to be high speed balanced and through the tool cooled where available, 5/8-11 thread and be 100% compatible with the 5-axis mill described herein.

- 4.1.2.1. Through the tool coolant end mill holder: 0.375 inch diameter X 1.75 inch body length, quantity: two (2)
- 4.1.2.2. Through the tool coolant end mill holder: 0.375 inch diameter X 2.5 inch body length, quantity: two (2)
- 4.1.2.3. Through the tool coolant end mill holder: 0.500 inch diameter X 1.75 inch body length, quantity two (2)
- 4.1.2.4. Through the tool coolant end mill holder: 0.500 inch diameter X 2.62 inch body length, quantity: two (2)
- 4.1.2.5. Through the tool coolant end mill holder: 0.750 inch diameter X 1.75 inch body length, quantity: two (2)
- 4.1.2.6. Through the tool coolant end mill holder: 0.750 inch diameter X 3.5 inch body length, quantity: two (2)
- 4.1.2.7. Through the tool coolant end mill holder: 1.000 inch diameter X 1.75 inch body length, quantity: two (2)
- 4.1.2.8. Through the tool coolant end mill holder: 1.000 inch diameter X 4.00 inch body length, quantity: two (2)

- 4.1.2.9. Through the tool coolant, DA 180 collet holder CAT 40 X 6.00 inch body length, complete/with (c/w) locknut and locknut wrench, quantity: six (6)
- 4.1.2.10. Through the tool coolant, DA 200 collet holder CAT 40 X 5.00 inch body length, complete/with (c/w) locknut and locknut wrench, quantity: six (6)
- 4.1.2.11. Through the tool coolant, solid tap holder CAT 40, 0 to 9/16 inch diameter capacity X 3-13/16 body length, quantity: two (2)
- 4.1.2.12. Through the tool coolant, solid tap holder CAT 40, 5/16 to 7/8 inch diameter capacity X 5-1/4 body length, quantity: two (2)
- 4.1.2.13. Ball bearing key type drill chuck: 0 to ½ in. capacity c/w key, Jacobs® or equivalent model number: 3402, c/w key mounted on a CAT 40 adaptor, quantity: two (2)
- 4.1.2.14. Ball bearing key type drill chuck: 1/8 to 5/8 in. capacity c/w key, Jacobs® or equivalent model number: 3A, c/w key mounted on a CAT 40 adaptor, quantity: two (2)
- 4.1.2.15. Keyless drill chuck: 0 to 10 mm capacity, Rohm® or equivalent type 134 spiro model number 019847, mounted on a CAT 40 adaptor, quantity: two (2)
- 4.1.2.16. Keyless drill chuck: 3 to 16 mm capacity, Rohm® or equivalent type 134 spiro model number 019884, mounted on a CAT 40 adaptor, quantity: two (2)
- 4.1.2.17. Cat40 holder 5" long that holds the DA100 collets : four (4)
- 4.1.2.18. Cat40 holder 6" long that holds the DA180 collets : four (4)
- 4.1.2.19. Cat40 holder 5" long that holds the DA200 collets : four (4)
- 4.1.3. Vice Package for 5-axis mill to fit 100mm T-slot table
 - 4.1.3.1. Machine vices, Qty. two (2)
 - 4.1.3.2. Jaw width minimum 120mm
 - 4.1.3.3. Base length minimum 200mm
 - 4.1.3.4. Clamping minimum range 0-200mm
 - 4.1.3.5. Maximum 10.5kgs
 - 4.1.3.6. Part numbers: Vice: 48205-125
 - 4.1.3.7. Equivalents will be accepted.
- 4.1.4. Built for 100mm T-slot distance
 - 4.1.4.1. Vice risers for 5-axis mill, Qty. two (2)
 - 4.1.4.2. Minimum dimensions 190mm x 150mm x 100mm
 - 4.1.4.3. Built for 100mm T-slot distance
 - 4.1.4.4. Part numbers: Riser: 45407
 - 4.1.4.5. Equivalents will be accepted.
- 4.1.5. Grid plate, Qty. one (1) ea
 - 4.1.5.1. Minimum dimensions 380mm x 380mm x 25mm
 - 4.1.5.2. Built for 100mm T-slot distance
 - 4.1.5.3. Part numbers: Grid Plate: 45742
 - 4.1.5.4. Equivalents will be accepted.
- 4.1.6. Set of mounting bores for grid plate, Qty. one (1) set
 - 4.1.6.1. Example: Lang Makro-Grip with Quick Point 96 system
 - 4.1.6.2. Part numbers: Bores: 45044
 - 4.1.6.3. Equivalents will be accepted.
- 4.1.7. Work Piece Size
 - 4.1.7.1. Maximum diameter not > 850mm
 - 4.1.7.2. Maximum height not > 450mm

4.1.7.3. Maximum weight not > 500kgs

5. Electrical Requirement

5.1. The 5-Axis Mill shall be wired as per CSA standard or acceptable equivalent (listed below)

5.1.1.220-240VAC

5.1.2.3 Ø

5.1.3.50/60Hz

5.1.4. If above power requirements are not available as a standard configuration, a transformer shall be provided by the supplier to meet the requirement.

5.2. Electrical Certification

5.2.1. The equipment being supplied must be certified by an acceptable Electrical Certification Organization. The following Certification Organizations are acceptable. The electrical control must bear a label from one of these organizations in order to be recognized as approved. Identify which Organization shall be used:

5.2.1.1. Canadian Standards Association (CSA),

5.2.1.2. QPS/Entela,

5.2.1.3. Intertek Testing Services,

5.2.1.4. Underwriters Laboratories of Canada (ULC),

5.2.1.5. Underwriters Laboratories Inc. (UL),

5.2.1.6. Met Laboratories Inc. (MET),

5.2.1.7. TUV Rheinland of North America,

5.2.1.8. Quality Auditing Institute (QAI),

5.2.1.9. TUV America Inc.

5.2.2. NOTE: Labels from all Organizations above (with the exception of CSA and ULC), must be accompanied by a small "c" at the eight o'clock position or Canadian Standard number to indicate the product has been certified to the Canadian Standard.,

5.2.3. Electrical equipment that is not certified by one of the above agencies can only be accepted if the equipment is "field" inspected and labelled by the Canadian Standards Association (CSA), QPS/Entela, Intertek Testing Services, MET Laboratories, TUV America Inc., Underwriters Laboratories of Canada under the Special Inspection Program. This inspection must take place before equipment delivery to FMF Cape Scott and a copy of verification documentation report must accompany the machine with delivery. Identify which Organization shall be used:

5.2.3.1. Canadian Standards Association (CSA),

5.2.3.2. QPS/Entela,

5.2.3.3. Intertek Testing Services,

5.2.3.4. Met Laboratories Inc. (MET),

5.2.3.5. TUV America Inc.,

5.2.3.6. Underwriters Laboratories of Canada (ULC).

6. Training

6.1. After the installation is complete and accepted by FMFCS, maintenance and operator training shall commence within two weeks. There will a total of (11) days of training required as detailed below:

6.1.1. FMFCS requires five (5) days of onsite program training for four (4) shop personnel

6.1.2. FMFCS requires one (1) day of onsite safety and maintenance training for four (4) maintenance personnel

6.1.3.FMFCS requires five (5) days of onsite training & start up support for four (4) shop personnel

6.2. The vendor is to determine/provide:

6.2.1. Content of the training.

6.2.2. Manuals and any training other training aids/material in English.

6.3. FMFCS will provide the on-site training area/room.

6.4. Training must take place Monday to Friday between 8am & 4pm onsite at FMFCS.

6.5. Any costs associated with training must be submitted with bid as per Annex B Basis of Payment.

7. Delivery

7.1. While delivery, installation, and training is required no later than 31 March 2023, the best delivery that could be offered is _____ weeks from receipt of contract.

8. Installation and Commissioning

8.1. Fleet Maintenance Facility Cape Scott (FMFCS) requires a "Turnkey" installation. All work is to be done during the normal work week (Monday through Friday) and business hours (0800 to 1600 hrs.). Any variation of these working hours must be pre-authorized by an IED representative in FMFCS. The following is a description of the responsibilities for both FMFCS and the Contractor:

8.2. Fleet Maintenance Facility Cape Scott (FMFCS) Responsibilities

8.2.1.FMFCS will have the installation area cleared of all non-essential material.

8.2.2.FMFCS will provide riggers, crane operator and forklift as required to move the equipment to its final location.

8.2.3.FMFCS will have the required electrical circuits within 20 feet of the machines final location.

8.2.4.FMFCS will have the required service pipes (air/water) within 12 feet on installation location.

8.3. Contractor Responsibilities

8.3.1.Delivery to Building D200 Fleet Maintenance Facility Cape Scott (FMFCS), CFB Halifax, Nova Scotia B3K 5X5.

8.3.2.The installation shall include unpacking, delivery inspection, cleaning, levelling, electrical and air connections as well as installation and setup of supplied software/hardware and control units.

8.3.3.The installation shall also include the installation and setup of contractor and FMFCS supplied accessories to enable completion of training and commissioning.

8.3.4.Installation shall be as per the latest Canadian Electrical Code (CEC).

8.3.5.The 5-axis mill shall be commissioned and set to work by the contractor.

8.3.6.Demonstration of the 5-axis mill operation and control programming must be complete before accepted by FMFCS.

9. Documentation Required

9.1. Manufacturers original hard copy equipment manuals, in English, quantity: two (2), containing:

9.1.1.Installation Instructions

9.1.2.Maintenance manual

9.1.3.Operating manual

9.1.4.Parts list

9.1.5.Electrical circuit diagrams

9.1.6. Programming manual

9.2. This documentation is to be shipped to FMFCS Industrial Engineering Manager within 30 days after the acceptance of the contract or accompany the equipment during delivery to the address provided on tender document.

9.3. FMFCS Industrial Engineering Manager mailing address:

FMFCS Industrial Engineering Manager
Fleet Maintenance Facility Cape Scott
Building D 200, Rm 3327,
P.O. Box 99000 Stn. Forces,
Halifax, Nova Scotia
B3K 5X5

10. Optional Requirement – FMF Cape Breton

10.1. Optional Requirement – May or may not be exercised within 12 months of equipment being commissioned at FMFCS in Halifax, NS

10.1.1. One (1) 5-Axis Mill including

- 10.1.1.1. Accessories as detailed in original requirement,
- 10.1.1.2. Installation as detailed in original requirement, and
- 10.1.1.3. Training as detailed in original requirement.

10.1.2. Delivery to:

Central Storage Facility
Fleet Maintenance Facility Cape Breton
CFB Esquimalt (Dockyard)
Building D250 – Door 33
1600 Esquimalt Road
Victoria, BC V9A 7N2

11. WARRANTY

11.1. The equipment shall be guaranteed by the supplier or manufacturer to be free from manufacturing and operational defects for a minimum period of 1 year from the date received at this facility, FMF Cape Scott or after commissioning and training is completed by the supplier and the equipment is put into service, whichever is later.

11.2. The supplier shall be responsible for the provision of labour, parts, and field service at their own expense during the term of the warranty period. All other warranties over and above those specified herein shall be considered valid.

11.3. All reasonable effort to action warranty items with the greatest expediency will be expected, taking into consideration impact on facility production, parts availability and travel by the supplier.

ANNEX B

BASIS OF PAYMENT

Pricing offered must be in Canadian dollars, Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included.

A bid must comply with the requirements of the bid solicitation outlined in Annex A and meet all mandatory criteria as outlined in Annex C to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of contract.

No further charges will be allowed.

Table #1 Firm Requirement:

ITEM	U of I	QTY	UNIT PRICE
CNC 5-Axis Mill as fully detailed in Annex A Make and Model:	EA	1	
Required options as fully detailed in Annex A Make and Model:	LOT	1	
Delivery/Installation/Commissioning as fully detailed in Annex A	LOT	1	
Training as fully detailed in Annex A. <i>Any costs associated with training must be included in this unit price</i>	LOT	1	
	TOTAL		

Table #2 Optional Requirement:

ITEM	U of I	QTY	UNIT PRICE
CNC 5-Axis Mill as fully detailed in Annex A Make and Model:	EA	1	
Required options as fully detailed in Annex A Make and Model:	LOT	1	
Delivery/Installation/Commissioning as fully detailed in Annex A	LOT	1	

Solicitation No. - N° de l'invitation
W355B-220497/A
Client Ref. No. - N° de réf. du client
W355B-220497

Amd. No. - N° de la modif.
File No. - N° du dossier

Buyer ID - Id de l'acheteur
HAL411
CCC No./N° CCC - FMS No./N° VME

Training as fully detailed in Annex <i>A. Any costs associated with training must be included in this unit price</i>	LOT	1	
	TOTAL		

Table #3 Totals:

ITEM	PRICE
Table #1 Total	
Table #2 Total	
TOTAL	

Solicitation No. - N° de l'invitation
W355B-220497/A
Client Ref. No. - N° de réf. du client
W355B-220497

Amd. No. - N° de la modif.
File No. - N° du dossier

Buyer ID - Id de l'acheteur
HAL411
CCC No./N° CCC - FMS No./N° VME

ANNEX C

SECURITY REQUIREMENTS

See following page(s) for Security Requirement Checklist.



W355B-220497

UNCLASSIFIED

LISTE DE VÉRIFICATION DES EXIGENCES RELATIVES À LA SÉCURITÉ (LVERS)

1. Originating Government Department or Organization / Ministère ou organisme gouvernemental d'origine		2. Branch or Directorate / Direction générale ou Direction	
DND		Fleet Maintenance Facility Cape Scott	
3. a) Subcontract Number / Numéro du contrat de sous-traitance		3. b) Name and Address of Subcontractor / Nom et adresse du sous-traitant	
4. Brief Description of Work / Brève description du travail 1.1. The Department of Defence (DND), Fleet Maintenance Facility Cape Scott (FMF CS) has a requirement for the design, construction and supply of one (1) 5 Axis Milling Machine. FMF CS will require delivery, installation, commissioning, and training.			
5. a) Will the supplier require access to Controlled Goods? Le fournisseur aura-t-il accès à des marchandises contrôlées?		<input checked="" type="checkbox"/> No Non <input type="checkbox"/> Yes Oui	
5. b) Will the supplier require access to unclassified military technical data subject to the provisions of the Technical Data Control Regulations? Le fournisseur aura-t-il accès à des données techniques militaires non classifiées qui sont assujetties aux dispositions du Règlement sur le contrôle des données techniques?		<input checked="" type="checkbox"/> No Non <input type="checkbox"/> Yes Oui	
6. Indicate the type of access required / Indiquer le type d'accès requis			
6. a) Will the supplier and its employees (e.g. cleaners, maintenance personnel) require access to PROTECTED and/or CLASSIFIED information or assets? Le fournisseur ainsi que les employés auront-ils accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS? (Specify the level of access using the chart in Question 7. c) (Préciser le niveau d'accès en utilisant le tableau qui se trouve à la question 7. c)		<input checked="" type="checkbox"/> No Non <input type="checkbox"/> Yes Oui	
6. b) Will the supplier and its employees (e.g. cleaners, maintenance personnel) require access to restricted access areas? No access to PROTECTED and/or CLASSIFIED information or assets is permitted. Le fournisseur et ses employés (p. ex. nettoyeurs, personnel d'entretien) auront-ils accès à des zones d'accès restreintes? L'accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS n'est pas autorisé.		<input type="checkbox"/> No Non <input checked="" type="checkbox"/> Yes Oui	
6. c) Is this a commercial courier or delivery requirement with no overnight storage? S'agit-il d'un contrat de messagerie ou de livraison commerciale sans entreposage de nuit?		<input checked="" type="checkbox"/> No Non <input type="checkbox"/> Yes Oui	
7. a) Indicate the type of information that the supplier will be required to access / Indiquer le type d'information auquel le fournisseur devra avoir accès			
Canada <input type="checkbox"/>		NATO / OTAN <input type="checkbox"/>	
		Foreign / Étranger <input type="checkbox"/>	
7. b) Release restrictions / Restrictions relatives à la diffusion			
No release restrictions Aucune restriction relative à la diffusion <input type="checkbox"/>		All NATO countries Tous les pays de l'OTAN <input type="checkbox"/>	
Not releasable À ne pas diffuser <input type="checkbox"/>			
Restricted to: / Limité à : Specify country(ies): / Préciser le(s) pays : <input type="checkbox"/>		Restricted to: / Limité à : Specify country(ies): / Préciser le(s) pays : <input type="checkbox"/>	
		No release restrictions Aucune restriction relative à la diffusion <input type="checkbox"/>	
		Restricted to: / Limité à : Specify country(ies): / Préciser le(s) pays : <input type="checkbox"/>	
7. c) Level of information / Niveau d'information			
PROTECTED A <input type="checkbox"/>		NATO UNCLASSIFIED <input type="checkbox"/>	
PROTÉGÉ A <input type="checkbox"/>		NATO NON CLASSIFIÉ <input type="checkbox"/>	
PROTECTED B <input type="checkbox"/>		NATO RESTRICTED <input type="checkbox"/>	
PROTÉGÉ B <input type="checkbox"/>		NATO DIFFUSION RESTREINTE <input type="checkbox"/>	
PROTECTED C <input type="checkbox"/>		NATO CONFIDENTIAL <input type="checkbox"/>	
PROTÉGÉ C <input type="checkbox"/>		NATO CONFIDENTIEL <input type="checkbox"/>	
CONFIDENTIAL <input type="checkbox"/>		NATO SECRET <input type="checkbox"/>	
CONFIDENTIEL <input type="checkbox"/>		NATO SECRET <input type="checkbox"/>	
SECRET <input type="checkbox"/>		COSMIC TOP SECRET <input type="checkbox"/>	
SECRET <input type="checkbox"/>		COSMIC TRÈS SECRET <input type="checkbox"/>	
TOP SECRET <input type="checkbox"/>			
TRÈS SECRET <input type="checkbox"/>			
TOP SECRET (SIGINT) <input type="checkbox"/>			
TRÈS SECRET (SIGINT) <input type="checkbox"/>			
		PROTECTED A <input type="checkbox"/>	
		PROTÉGÉ A <input type="checkbox"/>	
		PROTECTED B <input type="checkbox"/>	
		PROTÉGÉ B <input type="checkbox"/>	
		PROTECTED C <input type="checkbox"/>	
		PROTÉGÉ C <input type="checkbox"/>	
		CONFIDENTIAL <input type="checkbox"/>	
		CONFIDENTIEL <input type="checkbox"/>	
		SECRET <input type="checkbox"/>	
		SECRET <input type="checkbox"/>	
		TOP SECRET <input type="checkbox"/>	
		TRÈS SECRET <input type="checkbox"/>	
		TOP SECRET (SIGINT) <input type="checkbox"/>	
		TRÈS SECRET (SIGINT) <input type="checkbox"/>	



PART A (continued) / PARTIE A (suite)

8. Will the supplier require access to PROTECTED and/or CLASSIFIED COMSEC information or assets?
Le fournisseur aura-t-il accès à des renseignements ou à des biens COMSEC désignés PROTÉGÉS et/ou CLASSIFIÉS? ☒ No / Non ☐ Yes / Oui

If Yes, indicate the level of sensitivity:

Dans l'affirmative, indiquer le niveau de sensibilité :

9. Will the supplier require access to extremely sensitive INFOSEC information or assets?
Le fournisseur aura-t-il accès à des renseignements ou à des biens INFOSEC de nature extrêmement délicate? ☒ No / Non ☐ Yes / Oui

Short Title(s) of material / Titre(s) abrégé(s) du matériel :

Document Number / Numéro du document :

PART B - PERSONNEL (SUPPLIER) / PARTIE B - PERSONNEL (FOURNISSEUR)

10. a) Personnel security screening level required / Niveau de contrôle de la sécurité du personnel requis

- | | | | |
|---|---|---|--|
| <input checked="" type="checkbox"/> RELIABILITY STATUS
COTE DE FIABILITÉ | <input type="checkbox"/> CONFIDENTIAL
CONFIDENTIEL | <input type="checkbox"/> SECRET
SECRET | <input type="checkbox"/> TOP SECRET
TRÈS SECRET |
| <input type="checkbox"/> TOP SECRET- SIGINT
TRÈS SECRET - SIGINT | <input type="checkbox"/> NATO CONFIDENTIAL
NATO CONFIDENTIEL | <input type="checkbox"/> NATO SECRET
NATO SECRET | <input type="checkbox"/> COSMIC TOP SECRET
COSMIC TRÈS SECRET |
| <input type="checkbox"/> SITE ACCESS
ACCÈS AUX EMPLACEMENTS | | | |

Special comments:

Commentaires spéciaux : _____

NOTE: If multiple levels of screening are identified, a Security Classification Guide must be provided.

REMARQUE : Si plusieurs niveaux de contrôle de sécurité sont requis, un guide de classification de la sécurité doit être fourni.

10. b) May unscreened personnel be used for portions of the work?
Du personnel sans autorisation sécuritaire peut-il se voir confier des parties du travail? ☒ No / Non ☐ Yes / Oui
- If Yes, will unscreened personnel be escorted?
Dans l'affirmative, le personnel en question sera-t-il escorté? ☐ No / Non ☐ Yes / Oui

PART C - SAFEGUARDS (SUPPLIER) / PARTIE C - MESURES DE PROTECTION (FOURNISSEUR)

INFORMATION / ASSETS / RENSEIGNEMENTS / BIENS

11. a) Will the supplier be required to receive and store PROTECTED and/or CLASSIFIED information or assets on its site or premises?
Le fournisseur sera-t-il tenu de recevoir et d'entreposer sur place des renseignements ou des biens PROTÉGÉS et/ou CLASSIFIÉS? ☒ No / Non ☐ Yes / Oui
11. b) Will the supplier be required to safeguard COMSEC information or assets?
Le fournisseur sera-t-il tenu de protéger des renseignements ou des biens COMSEC? ☒ No / Non ☐ Yes / Oui

PRODUCTION

11. c) Will the production (manufacture, and/or repair and/or modification) of PROTECTED and/or CLASSIFIED material or equipment occur at the supplier's site or premises?
Les installations du fournisseur serviront-elles à la production (fabrication et/ou réparation et/ou modification) de matériel PROTÉGÉ et/ou CLASSIFIÉ? ☒ No / Non ☐ Yes / Oui

INFORMATION TECHNOLOGY (IT) MEDIA / SUPPORT RELATIF À LA TECHNOLOGIE DE L'INFORMATION (TI)

11. d) Will the supplier be required to use its IT systems to electronically process, produce or store PROTECTED and/or CLASSIFIED information or data?
Le fournisseur sera-t-il tenu d'utiliser ses propres systèmes informatiques pour traiter, produire ou stocker électroniquement des renseignements ou des données PROTÉGÉS et/ou CLASSIFIÉS? ☒ No / Non ☐ Yes / Oui
11. e) Will there be an electronic link between the supplier's IT systems and the government department or agency?
Disposera-t-on d'un lien électronique entre le système informatique du fournisseur et celui du ministère ou de l'agence gouvernementale? ☒ No / Non ☐ Yes / Oui



PART C - (continued) / PARTIE C - (suite)

For users completing the form **manually** use the summary chart below to indicate the category(ies) and level(s) of safeguarding required at the supplier's site(s) or premises.

Les utilisateurs qui remplissent le formulaire **manuellement** doivent utiliser le tableau récapitulatif ci-dessous pour indiquer, pour chaque catégorie, les niveaux de sauvegarde requis aux installations du fournisseur.

For users completing the form **online** (via the Internet), the summary chart is automatically populated by your responses to previous questions.

Dans le cas des utilisateurs qui remplissent le formulaire **en ligne** (par Internet), les réponses aux questions précédentes sont automatiquement saisies dans le tableau récapitulatif.

SUMMARY CHART / TABLEAU RÉCAPITULATIF

Category Catégorie	PROTECTED PROTÉGÉ			CLASSIFIED CLASSIFIÉ			NATO				COMSEC					
	A	B	C	CONFIDENTIAL	SECRET	TOP SECRET	NATO RESTRICTED	NATO CONFIDENTIAL	NATO SECRET	COSMIC TOP SECRET	PROTECTED PROTÉGÉ			CONFIDENTIAL	SECRET	TOP SECRET
				CONFIDENTIEL			NATO DIFFUSION RESTREINTE	NATO CONFIDENTIEL		COSMIC COSMIC TRÈS SECRET	A	B	C	CONFIDENTIEL		TRES SECRET
Information / Assets Renseignements / Biens	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Production	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IT Media / Support TI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IT Link / Lien électronique	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. a) Is the description of the work contained within this SRCL PROTECTED and/or CLASSIFIED?

La description du travail visé par la présente LVERS est-elle de nature PROTÉGÉE et/ou CLASSIFIÉE?

☒ No
Non

☐ Yes
Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification".

Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire.

12. b) Will the documentation attached to this SRCL be PROTECTED and/or CLASSIFIED?

La documentation associée à la présente LVERS sera-t-elle PROTÉGÉE et/ou CLASSIFIÉE?

☒ No
Non

☐ Yes
Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification" and indicate with attachments (e.g. SECRET with Attachments).

Dans l'affirmative, classifiez le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire et indiquer qu'il y a des pièces jointes (p. ex. SECRET avec des pièces jointes).

ANNEX D

MANDATORY TECHNICAL EVALUATION

5-AXIS MILLING MACHINE

Instructions:

Bidder to complete **Table A only** if you are offering the suggested Manufacturer and Model **Matsuura MX-850 OR Table B only** if you are offering an equivalent. **You only need to complete one table.** You do not need to complete both Table A and Table B

Bidders should include at least (1) one copy of descriptive literature for the item(s) offered in sufficient detail to clearly indicate compliance with each of the individual requirements from the Statement of Requirement (SOR) detailed herein.

Bidders should cross reference the page number and highlight the specification in your technical data sheets or brochure to demonstrate and support your compliance for each of the Mandatory Technical Criteria within the SOR. You may add any comments to support your bid.

It will be to your advantage to furnish as much detail as possible to support your comments and your claims of compliance for each specification.

References to Internet websites or information that is not included in the bid will not be evaluated.

NOTE: The Crown is under NO obligation to seek clarification of the bid(s) or the supporting technical documentation provided. Failure to meet any of the following will render your proposal non-compliant and will be given no further consideration.

Bidder to complete **Table A only** if you are offering the suggested Manufacturer and Model in Section 1.2 Annex A **OR Table B only** if you are offering an equivalent.

TABLE A- EVALUATION TABLE FOR SUGGESTED MANUFACTURER AND MODEL- Matsuura MX-850

No.	Specifications	Page number or cross reference	Comments
1.2	Suggested Manufacturer and Model		
1.2.1	Matsuura MX-850		
5	Electrical Requirement		
5.1	The 5-Axis Mill shall be wired as per CSA standard or acceptable equivalent (listed below)		
5.1.1	220-240VAC		
5.1.2	3 Ø		
5.1.3	50/60Hz		
5.1.4	If above power requirements are not available as a standard configuration, a transformer shall be provided by the supplier to meet the requirement.		

TABLE B- EVALUATION TABLE FOR EQUIVALENT

No.	Specifications	Page number or cross reference	Comments
2	CNC 5-Axis Mill General Features		
2.1	Movement & Ranges		
2.1.1	X-axis minimum 900mm		
2.1.2	Y-axis minimum 780mm		
2.1.3	Z-axis minimum 650mm		
2.1.4	A-axis (trunnion pivot axis) range -125° to +30°		
2.1.5	C-axis (table rotation axis) 360°		
2.1.6	Table surface to spindle gauge line range 70-720mm		
2.1.7	A-axis centre to spindle gauge line range 0-650mm		
2.1.8	A-axis centre to table surface minimum 70mm		
2.1.9	Table centre to X-zero position minimum 400mm		
2.1.10.	Table centre to Y-axis position minimum 390mm		
2.2	Work Table		
2.2.1	Minimum 700mm table diameter		
2.2.2	Maximum work load 500kg		
2.2.3	Maximum work envelope (diameter / height) 760mm x 450mm		
2.2.4	Maximum work envelope with limitation (diameter / height) 850mm x 450mm		
2.2.5	Distance from floor to table surface minimum 910mm		
2.2.6	Table indexing (A / C axis) not more than 0.001° / 0.001°		
2.3	Spindle		
2.3.1	Speed range 40-15000RPM		
2.3.2	Taper (Big Plus CAT 40) 7/24 taper #40		
2.3.3	Spindle diameter minimum 80mm		

2.3.4	Maximum spindle motor power (continuous 35HP / maximum 40HP)		
2.3.5	Maximum spindle torque (up to 880 RPM) 350Nm		
2.3.6	Lubrication by grease supply		
2.4	Feed Rate		
2.4.1	Maximum rapid feed rate (X/Y/Z) (metres per minute) 40mpm/40mpm/40mpm		
2.4.2	Maximum rapid feed rate (A/C axis) minimum 17/33RPM		
2.4.3	Maximum rapid (acceleration / deceleration) (X/Y/Z) 0.31G/0.31G/0.48G		
2.4.4	Maximum rapid (acceleration / deceleration) (A/C axis) 865/1200°/second ²		
2.4.5	Cutting feed rate (X/Y/Z) range 1~40,000mm/minute (0.03-1575 inches per minute)		
2.4.6	Maximum cutting feed rate (A/C axis) 17/33RPM		
2.4.7	Minimum increment (X/Y/Z) 0.001mm		
2.4.8	Minimum increment (A/C axis) 0.001°		
2.6	General Machine Specification		
2.6.1	Ballscrew diameter and pitch (driven axis X/Y/Z) 40mm x 16p		
2.6.2	Axis thrust (X/Y/Z) 7.2kn/7.4kn/11.7kn		
2.6.3	Feed motor X axis minimum 5.0hp		
2.6.4	Feed motor Y axis minimum 5.0hp		
2.6.5	Feed motor Z axis minimum 9.0hp		
2.6.6	Feed motor A axis minimum 7.0hp		
2.6.7	Feed motor C axis minimum 3.0hp		
2.6.8	Hydraulic pump motor minimum 3.0hp		
2.6.9	Spindle oil cooler motor minimum 0.5hp		
2.6.10	Coolant tank capacity minimum 500 litres		
2.6.11	Hydraulic tank capacity minimum 20 litres		
2.6.12	Spindle oil cooler tank minimum 7 litres		
2.6.13	AC servo motors for axis ballscrews (X/Y/Z/A/C)		
2.6.14	Position detector using an optical encoder		
2.6.15	Ceramic spindle bearings		

2.6.16	Direct drive spindle arrangement for headstock		
2.6.17	Synchronized tapping capability to a maximum of 4000RPM		
2.6.18	Gearless transmission		
2.6.19	Central cooling system for spindle and motor		
2.6.20	Capable of supporting gear hobbing tools and set up equipment		
2.7	Accuracies		
2.7.1	Positioning (X/Y/Z axis) not > $\pm 0.0025\text{mm}$		
2.7.2	Positioning repeatability (X/Y/Z axis) not > $\pm 0.001\text{mm}$		
2.7.3	Positioning for rotating axis (A & C) not > 3 seconds		
2.7.4	Repeatability for rotating axis (A & C) not > ± 2 seconds		
2.8	Machine Dimensions		
2.8.1	Maximum height 3400mm		
2.8.2	Maximum width 4300mm		
2.8.3	Maximum length or depth 6800mm including maintenance area & chip conveyor		
2.8.4	Maximum weight 17000kgs		
2.9	Software Control System		
2.9.1	Five controlled axis (X/Y/Z/A/C)		
2.9.2	Five positioning axis control simultaneously, linear interpolation		
2.9.3	Two circular interpolation controlled simultaneously		
2.10.	Input Commands		
2.10.1	Minimum input increment 0.001mm		
2.10.2	Minimum command increment 0.001mm		
2.10.3	2.10.3. Maximum programmable dimensions $\pm 99999.0\text{mm}$		
2.10.4	Must have metric and imperial unit input capabilities		
2.10.5	Must have a buffer register		
2.10.6	Must have absolute and incremental programming capabilities		
2.10.7	Must have decimal point input		

2.22.1	Emergency stop button /function		
3	CNC 5-Axis Mill Standard Equipment		
3.1	Cabinet / Enclosure		
3.1.1	Total enclosed steel splash guard minimum thickness 2.3mm		
3.1.2	Door interlocks		
3.1.3	Work light		
3.1.4	Rear discharge auger for chip removal		
3.1.5	Chip flush system support		
3.1.6	Sealed & dust proof		
3.1.7	Vibration maximum 0.5G-force		
3.1.8	Able to operate at up to 45°C and 75% humidity with no condensation		
3.1.9	Poly-carbonate window material minimum thickness 19mm		
3.1.10.	Noise threshold while running <70dB		
3.1.11	Enclosure door opening minimum 1000mm		
3.1.12	Maximum distance from front of machine (operator access) to spindle 110mm		
3.1.13	Maximum distance from front of machine (operator access) to centre of work table 500mm		
3.1.14	Maximum distance from floor to table top 920mm		
3.1.15	Must have a sliding cabinet top to facilitate crane access with minimum opening of 425mm		
3.2	Milling Machine		
3.2.1	Flood coolant system		
3.2.2	Chip flush system		
3.2.3	Chip conveyor with rear centre discharge		
3.2.4	Spindle grease supply system		
3.2.5	Spindle overload protection		
3.2.6	Linear scale feedback for X, Y & Z axis		
3.2.7	5-axis kinematics setup and adjustment macro		
3.2.8	Hydraulic unit		
3.2.9	Intelligent precision contouring function		
3.2.10.	Intelligent protection system with collision avoidance		

3.2.11	Synchronized tapping function		
3.2.12	Automatic grease lubrication unit for X, Y&Z linear guideways		
3.2.13	HMI controls (Human Machine Interface)		
5	Electrical Requirement		
5.1	The 5-Axis Mill shall be wired as per CSA standard or acceptable equivalent (listed below) <i>Canadian Standards Association (CSA), QPS/Entela, Intertek Testing Services, Underwriters Laboratories of Canada (ULC), Underwriters Laboratories Inc. (UL), Met Laboratories Inc. (MET), TUV Rheinland of North America, Quality Auditing Institute (QAI), TUV America Inc.</i>		
5.1.1	220-240VAC		
5.1.2	3 Ø		
5.1.3	50/60Hz		
5.1.4	If above power requirements are not available as a standard configuration, a transformer shall be provided by the supplier to meet the requirement.		

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ANNEX E to PART 3 OF THE BID SOLICITATION

ELECTRONIC PAYMENT INSTRUMENTS

The Bidder accepts any of the following Electronic Payment Instrument(s):

- ☐ VISA Acquisition Card;
- ☐ MasterCard Acquisition Card;
- ☐ Direct Deposit (Domestic and International);
- ☐ Electronic Data Interchange (EDI);
- ☐ Wire Transfer (International Only);

ANNEX F

INTEGRITY PROVISIONS – LIST OF DIRECTORS

Please provide list of names of the following entities, according to the ownership nature of the company

1. For a Corporation - each current member of the Bidder's Board of Directors;

2. For a Partnership, General Partnership or Limited Partnership - the names of all current partners;

3. For a Sole Proprietorship or an individual doing business under a firm name - the name of the sole proprietor or individual;

4. In the case of a joint venture - For a Joint Venture - the names of all current members of the Joint venture;

5. For an individual - the full name of the person
