

**RETURN BIDS TO:  
RETOURNER LES SOUMISSIONS À:**

**Bid Receiving  
PWGSC  
33 City Centre Drive  
Suite 480  
Mississauga  
Ontario  
L5B 2N5  
Bid Fax: (905) 615-2095**

**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**

|  |  |
|--|--|
| <b>Title - Sujet</b><br>Rotary Joints  |  |
| <b>Solicitation No. - N° de l'invitation</b><br>K3D33-131018/A   | <b>Date</b><br>2014-05-20  |
| <b>Client Reference No. - N° de référence du client</b><br>K3D33-131018  |  |
| <b>GETS Reference No. - N° de référence de SEAG</b><br>PW-\$TOR-015-6610   |  |
| <b>File No. - N° de dossier</b><br>TOR-3-36015 (015)   | <b>CCC No./N° CCC - FMS No./N° VME</b>   |
| <b>Solicitation Closes - L'invitation prend fin</b><br><b>at - à 02:00 PM</b><br><b>on - le 2014-06-30</b>   | <b>Time Zone</b><br><b>Fuseau horaire</b><br>Eastern Daylight Saving<br>Time EDT |
| <b>F.O.B. - F.A.B.</b><br><b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>  |  |
| <b>Address Enquiries to: - Adresser toutes questions à:</b><br>Abela, Aaron  | <b>Buyer Id - Id de l'acheteur</b><br>tor015                                     |
| <b>Telephone No. - N° de téléphone</b><br>(905) 615-2061 ( )   | <b>FAX No. - N° de FAX</b><br>(905) 615-2060                                     |
| <b>Destination - of Goods, Services, and Construction:</b><br><b>Destination - des biens, services et construction:</b><br>DEPARTMENT OF THE ENVIRONMENT<br>4905 DUFFERIN STREET<br>DOWNSVIEW<br>Ontario<br>M3H5T4<br>Canada |  |

**Instructions: See Herein**

**Instructions: Voir aux présentes**

**Vendor/Firm Name and Address**

**Raison sociale et adresse du  
fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**

Public Works and Government Services Canada  
Ontario Region  
33 City Centre Drive  
Suite 480  
Mississauga  
Ontario  
L5B 2N5

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

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See attached.

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**TITLE: Rotary Joints**

**PART 1 - GENERAL INFORMATION**

**1. Introduction**

The bid solicitation is divided into six parts plus attachments and annexes, as follows:

- Part 1 General Information: provides a general description of the requirement;
- Part 2 Bidder Instructions: provides the instructions, clauses and conditions applicable to the bid solicitation;
- Part 3 Bid Preparation Instructions: provides bidders with instructions on how to prepare their bid;
- Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria that must be addressed in the bid, and the basis of selection;
- Part 5 Certifications: includes the certifications to be provided;
- Part 6 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

The Annexes include the Requirement, the Basis of Payment, the Technical Evaluation and certification.

**2. Summary**

Environment Canada, Meteorological Services of Canada (MSC), Downsview, Ontario requires the supply and delivery of rotary joints from the Date of Contract Award to March 31, 2020.

Delivery of 15 units is required on or before March 31, 2015, delivery of 10 units is required on or before March 31, 2016 and delivery of 10 units is required on or before March 31, 2017. MSC also requires the option to purchase optional quantities in various quantities, from time to time, during the contract period. Optional quantities of up to 15 units may be required by March 31, 2015, optional quantities of up to 15 units may be required by March 31, 2016 and optional quantities of up to 15 units may be required by March 31, 2017.

Optional quantities of up to 30 units may be required by March 31, 2018, optional quantities of up to 30 units may be required by March 31, 2019 and optional quantities of up to 30 units may be required by March 31, 2020.

Bidders must submit two (2) samples of their proposed rotary joint for hardware testing which is part of the evaluation process detailed in Annex D, Technical Evaluation Plan. Samples are to be delivered to:

Environment Canada  
Meteorological Services of Canada  
4905 Dufferin Street  
Toronto, Ontario. CANADA  
M3H 5T4  
Attention: Chief, Radar Operations, National Radar Network.

Bidders must submit with their bids by Bid Closing Date a copy of the documentation that shows that the sample rotary joints were shipped to MSC prior to Bid Closing Date and Time. Acceptable documentation

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includes a courier slip, a Canada Post Corporation (CPC) Priority Courier Bill of Lading, or a CPC Xpresspost Label.

Bidders must provide a list of names, or other related information as needed, pursuant to section 01 of Standard Instructions 2003 and 2004.

The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), the North American Free Trade Agreement (NAFTA), and the Agreement on Internal Trade (AIT).

### **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 of receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

## **PART 2 - BIDDER INSTRUCTIONS**

### **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>) 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 (2014-03-01) 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: sixty (60) days

Insert: ninety (90) days

### **2. Submission of Bids**

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

Due to the nature of the bid solicitation, bids transmitted by facsimile to PWGSC will not be accepted.

### **3. Enquiries - Bid Solicitation**

All enquiries must be submitted in writing to the Contracting Authority no later than 10 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 questions or may request that the Bidder do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

## **5. Applicable Laws**

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

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.

## **PART 3 - BID PREPARATION INSTRUCTIONS**

### **1. Bid Preparation Instructions**

Canada requests that bidders provide their bid in separately bound sections as follows:

Section I:        Technical Bid (3 hard copies)  
Section II:       Financial Bid (1 hard copy)  
Section III:      Certifications (1 hard copy)

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 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](http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, bidders should:

- 1) 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
- 2) 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 demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability in a thorough, concise and clear manner for carrying out the work.

The technical bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

## **Section II: Financial Bid**

- 1.1** Bidders must submit their financial bid in accordance with the Basis of Payment in Annex "B". The total amount of Applicable Taxes must be shown separately.

## **Section III: Certifications**

Bidders must submit the certifications required under Part 5.

## **PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION**

### **1. Evaluation Procedures**

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

#### **1.1 Technical Evaluation**

##### **1.1.1 Mandatory Technical Criteria**

See Annex D, Technical Evaluation, Evaluation Phase I - Mandatory Technical Criteria.

##### **1.1.2 Submission of a Sample and Hardware Testing**

See Annex D, Technical Evaluation, Evaluation Phase II - Hardware Testing.

#### **1.2 Financial Evaluation**

##### **1.2.1 Mandatory Financial Criteria**

- (a) Bidders must complete and submit with its bid, Annex "B" - Basis of Payment, Section 1.1 and 2.3 in Canadian funds, Applicable Taxes excluded, FOB destination, delivery charges included, Canadian customs duties and excise taxes included.

**1.2.2** The price used in the evaluation will be the Total Evaluated Price, which is calculated as follows:

- (a) Total Evaluated Price is the sum of the Extended Prices of Sections 1.1 and 2.3 from Annex "B" Basis of Payment. The Extended Price of each contract year is calculated by multiplying the quantity identified by the proposed firm unit price.

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### 1.2.3 Evaluation of Price

The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, FOB destination, delivery included, Canadian customs duties and excise taxes included.

## 2. Basis of Selection – Mandatory Technical Criteria

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

## PART 5 - CERTIFICATIONS

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

The certifications provided by bidders to Canada are subject to verification by Canada at all times. Canada will declare a bid non-responsive, or will declare a contractor in default in carrying out any of its obligations under the Contract, 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 may render the bid non-responsive or constitute a default under the Contract.

### 1. Certifications Required Precedent to Contract Award

#### 1.1 Integrity Provisions - Associated Information

By submitting a bid, the Bidder certifies that the Bidder and its Affiliates are in compliance with the provisions as stated in Section 01 Integrity Provisions - Bid of Standard Instructions [2003](#). The associated information required within the Integrity Provisions will assist Canada in confirming that the certifications are true.

#### 1.2 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 ([http://www.labour.gc.ca/eng/standards\\_equity/eq/emp/fcp/list/inelig.shtml](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)) available from [Employment and Social Development Canada \(ESDC\) - Labour's](#) website.

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.

### 2. Additional Certifications Precedent to Contract Award

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



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## 2.1 OEM Certification

2.1.1 Any Bidder that is not the Original Equipment Manufacturer (OEM) for every item of hardware proposed as part of its bid is required to submit the OEM's certification regarding the Bidder's authority to provide and maintain the OEM's hardware, which must be signed by the OEM (not the Bidder). No Contract will be awarded to a Bidder who is not the OEM of the hardware it proposes to supply to Canada, unless the OEM certification has been provided to Canada. Bidders are requested to use the OEM Certification Form included with the bid solicitation Annex D. Although all the contents of the OEM Certification Form are required, using the form itself to provide this information is not mandatory. For Bidders/OEMs who use an alternate form, it is in Canada's sole discretion to determine whether all the required information has been provided. Alterations to the statements in the form may result in the bid being declared non-responsive.

2.1.2 If the hardware proposed by the Bidder originates with multiple OEMs, a separate OEM certification is required from each OEM.

2.1.3 For the purposes of this bid solicitation, OEM means the manufacturer of the hardware, as evidenced by the name appearing on the hardware, on all accompanying documentation, on mandatory certification reports, and on any support software.

## PART 6 - RESULTING CONTRACT CLAUSES

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

### 1. Requirement

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

#### 1.1 Optional Goods and/or Services

The Contractor grants to Canada the irrevocable option to acquire the goods, services or both described at Annex A and Annex B 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 the expiry of the Contract by sending a written notice to the Contractor.

### 2. 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)(<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

#### 2.1 General Conditions

2030 (2014-03-01), General Conditions - Higher Complexity - Goods, apply to and form part of the Contract.

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## **2.2 Supplemental General Conditions**

4001 (2013-01-28) Supplemental General Conditions - Hardware Purchase, Lease and Maintenance, apply to and form part of the Contract.

## **3. Security Requirement**

There is no security requirement applicable to this Contract.

## **4. Term of Contract**

### **4.1 Period of the Contract**

The period of the Contract is from date of Contract to March 31, 2020 inclusive.

### **4.2 Delivery Date**

4.2.1 For Year 1, 15 rotary joints must be delivered on or before March 31, 2015. If the optional quantities are exercised, the optional quantities must be delivered within 3 months of notification by the Contracting Authority.

4.2.2 For Year 2, 10 rotary joints must be delivered on or before March 31, 2016. If the optional quantities are exercised, the optional quantities must be delivered within 3 months of notification by the Contracting Authority.

4.2.3 For Year 3, 10 rotary joints must be delivered on or before March 31, 2017. If the optional quantities are exercised, the optional quantities must be delivered within 3 months of notification by the Contracting Authority.

4.2.4 For Year 4, if the optional quantities are exercised, the optional quantities must be delivered within 3 months of notification by the Contracting Authority.

4.2.5 For Year 5, if the optional quantities are exercised, the optional quantities must be delivered within 3 months of notification by the Contracting Authority.

4.2.6 For Year 6, if the optional quantities are exercised, the optional quantities must be delivered within 3 months calendar days of notification by the Contracting Authority.

## **5. Authorities**

### **5.1 Contracting Authority**

The Contracting Authority for the Contract is:

Aaron Abela  
Supply Specialist  
Public Works and Government Services Canada  
Acquisitions Branch  
Address: 33 City Centre Drive - Suite 480C, Mississauga, Ontario L5B 2N5  
Telephone: (905) 615-2061  
Facsimile: (905) 615-2060  
E-mail address: aaron.abela@pwgsc.gc.ca

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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.

## 5.2 Project Authority

The Project Authority for the Contract is:

Name: \_\_ (To be provided at time of contract award) \_\_

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.

## 5.3 Contractor's Representative

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_ - \_\_\_\_ - \_\_\_\_

Facsimile: \_\_\_\_ - \_\_\_\_ - \_\_\_\_

E-mail address: \_\_\_\_\_

## 6. Payment

### 6.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm unit prices, as specified in Annex B for a total cost of \$ \_\_\_\_\_ (insert the amount 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.

### 6.2 Limitation of Price

*SACC Manual* clause C6000C (2011-05-16) Limitation of Price

### 6.3 Multiple Payments

*SACC Manual* clause H1001C (2008-05-12) Multiple payments

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## 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.

B. One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

## 8. Certifications

### 8.1 Compliance

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing associated information are conditions of the Contract. Certifications are subject to verification by Canada during the entire period of the Contract. If the Contractor does not comply with any certification, fails to provide the associated information, or if it is determined that any certifications made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

## 9. Applicable Laws

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

## 10. 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 supplemental general conditions 4001 (2013-01-28) Hardware Purchase, Lease and Maintenance;
- (c) the general conditions 2030 (2014-03-01) General Conditions - Higher Complexity - Goods;
- (d) Annex A, Requirement;
- (e) Annex B, Basis of Payment;
- (f) Annex C, Certifications
- (g) the Contractor's bid dated \_\_\_\_\_, (*insert date of bid*)

## 11. Insurance

SACC Manual clause G1005C (2008-05-12) Insurance

## 12. SACC Manual Clauses

B1501C (2006-06-16) Electrical Equipment

B1505C (2006-06-16) Shipment of Hazardous Materials

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D3010C (2012-07-16) Dangerous Goods/Hazardous Products

D3015C (2007-11-30) Dangerous Goods/Hazardous Products

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## **ANNEX A**

### **REQUIREMENT**

#### **1.0 Scope**

The Meteorological Service of Canada (MSC) National Radar Program (NRP) consists of 30 sites across Canada. Each radar site operates continuously (24/7) with 2 functional Rotary Joints (60 units operating network wide). There is currently a project underway to upgrade 10 Radar Sites to include Dual Polarization capability, so an additional Rotary Joint may be required for each of those radar sites (resulting in 3 joints per site). The purchase and supply of new Rotary Joints ensure Life Cycle Management (LCM) replacement and sparing stock.

#### **1.1 Background**

A Rotary Joint is a mechanical device that transitions Radio Frequency (RF) energy between stationary and moving platforms, allowing RF energy from a stationary Radar Transmitter to pass through moving Azimuth and Elevation axis of an Antenna structure. Rotary Joints consist of bearings, seals and other components mounted in a precision machined housing. Since the antenna system is constantly in motion, these joints eventually deteriorate due to seal decay and bearing / internal part wear. Typically the NRP experiences approximately 6 Rotary Joints failures annually. Operation is maintained by either rebuilding or replacing faulty units.

#### **1.2 Deliverables**

Delivery of the Rotary Joint maintenance and repair documentation for the make and model of the rotary joint to be supplied in either electronic .PDF format or hardcopy must be completed within fifteen (15) days of contract award.

Complete Rotary Joints, conforming to Annex "A" Technical Specifications must be delivered to 4905 Dufferin Street, Toronto, Ontario. Canada. M3H 5T4.

Delivery for the firm quantities of the Rotary Joints must be received on or before March 31, 2015, March 31, 2016 and March 31, 2017 respectively. Delivery for optional quantities of the Rotary Joints must be received within three (3) months from receipt of the notice from the Contracting Authority.

#### **1.3 Description**

Rotary Joint must be "I" Style (Inline) Rotary Joint with one fixed and one rotating end, with a UG-406B/U (WR187) Choke Flange welded on each end. The Choke Flange must be drilled and tapped for Quantity 8 #10-32 UNF screws.

### **2.0 Rotary Joint Technical Requirements**

#### **Technical Specifications**

Deliverable: The Rotary Joint must meet or exceed each of the specifications outlined below:

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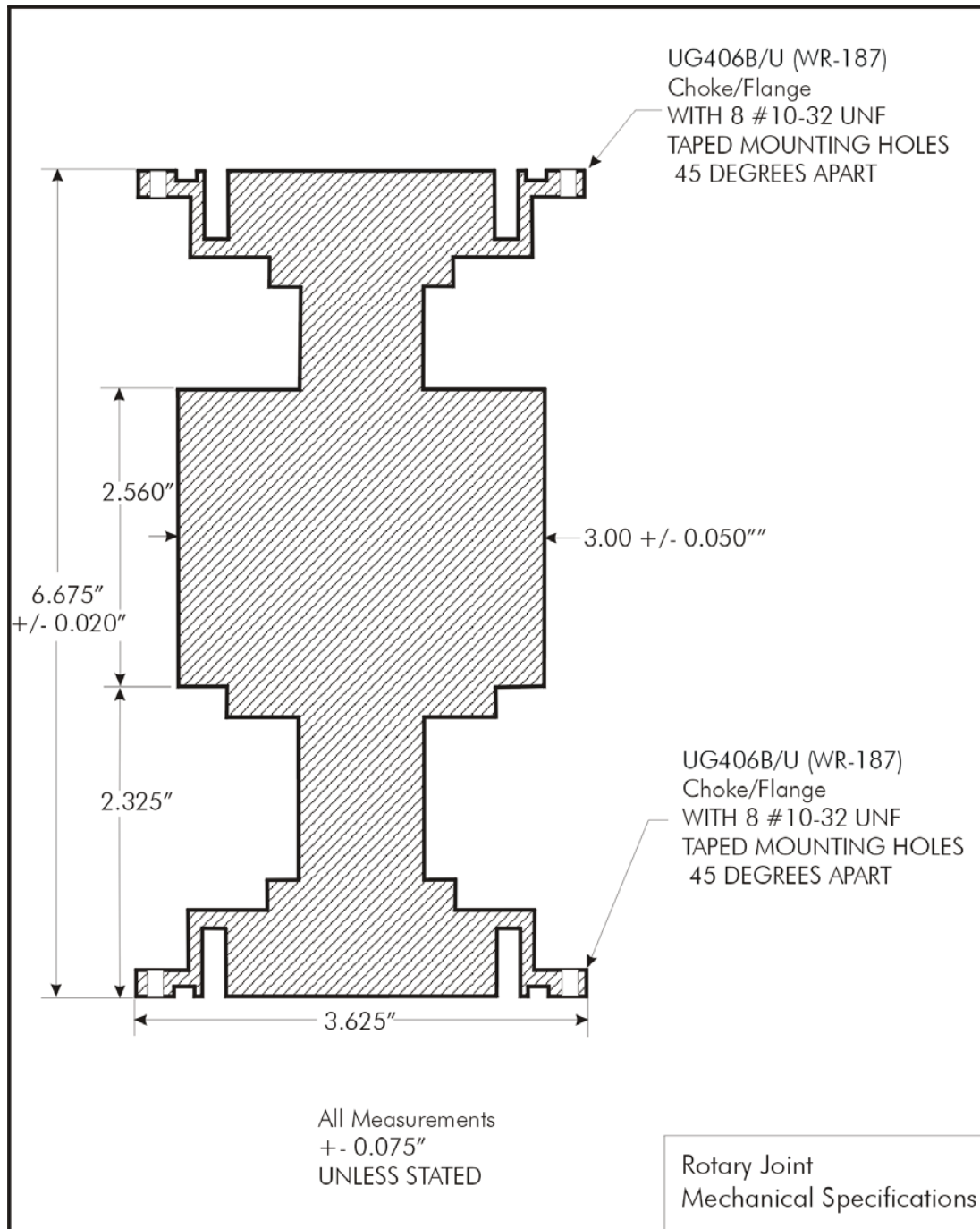
## 2.1 Mechanical Specifications

| Item | Description  |
|------|--|
| 1    | Must maintain pressurization of $\geq 15$ PSIG   |
| 2    | Must be constructed of any one of the following materials:<br>a) Aluminum; or<br>b) Copper; or<br>c) Brass Alloy |
| 3    | Finish must be either Chromate or Silver Plated.   |
| 4    | Must have a Torque Max of 5 IN-LBS   |
| 5    | Leakage Rate of loss must be $< 0.3$ Cubic Inches per Minute   |
| 6    | Must not include any body mounting flange  |
| 7    | Rotational Speed must be 12 RPM minimum  |
| 8    | Flange Terminations on ends must have UG406B/U Choke<br>with Qty 8 10-32 UNF Threaded holes every 45 degrees     |
| 9    | The Rotary Joint Bearings must have a Mean-Time-Between-Failure of 4 years or more.                              |
| 10   | The Rotary Joint Seals must have a Mean-Time-Between-Failure of 4 years or more.                                 |

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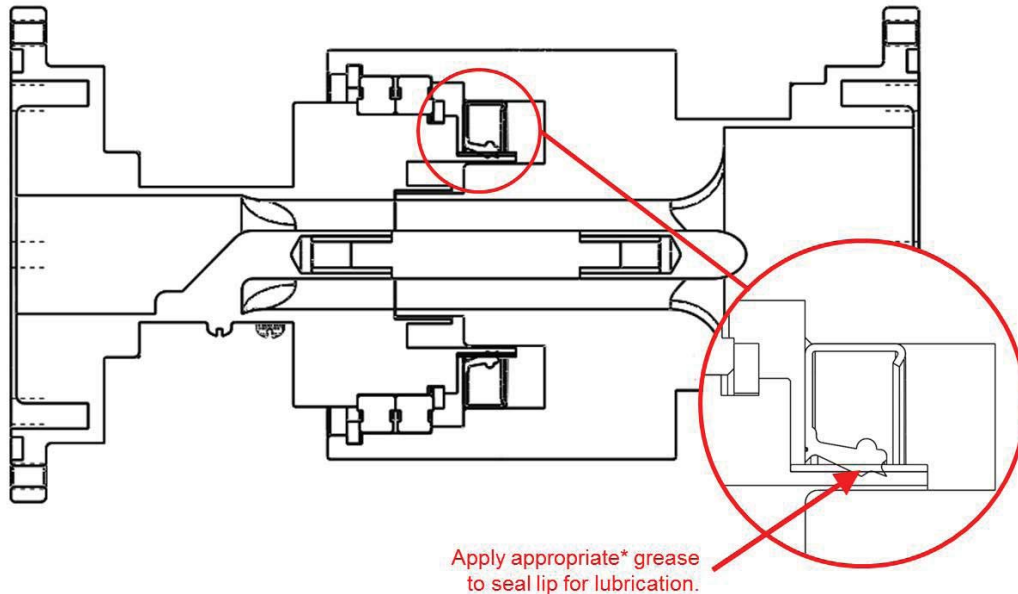
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**Figure 1: Mechanical Specifications**





**Figure 2: Grease Application Specification**

**Note 1:** Grease must be compatible with the installed seal material, shaft material, and operating temperature range. Quantity of grease applied must be controlled. Upon request, Contractor must provide a written statement stating the seal lip material used; the seal part number; the grease product that will be used (with confirmation of compatibility).

**Environment Canada reserves the right to enforce a seal material and grease type that is compatible together.**

## 2.2 Electrical Specifications

| Item | Description   |
|------|---|
| 1    | Operating Frequency must be 5.6 – 5.65 GHz                              |
| 2    | Minimum Peak Power must be 450 KWATTS at 0 PRESSURE (PSIG)              |
| 3    | Voltage Standing Wave Ratio (VSWR) must be less than or equal to 1.15:1 |
| 4    | Insertion Loss must be 0.10 dB Max                                      |
| 5    | Termination Flanges must have UG406B/U (WR187) Choke                    |

## 2.3 Environmental Specifications

| Item | Description  |
|------|--|
| 1    | Must continuously operate uninterrupted within the -20°C to 45°C temperature range |
| 2    | Storage temperature range must be -20°C to 40°C                                    |

## 2.4 Performance Specifications

| Item | Description |
|------|-------------|
|------|-------------|

---

|   |  |
|---|--|
| 1 | Performance data illustrating measured results must show:<br><br>(a) the Insertion Loss over the operating Frequency Range<br>(b) the expected Voltage Standing Wave Ratio (VSWR) versus the entire 360 degree rotational angle<br>(c) the maximum Radio Frequency (RF) power level that can pass through the device |
|---|--|

### **3.0 Manufacturing and Repair Facility**

3.1 The Contractor upon request must identify the Manufacturing Facility and provide each of the following contact information:

- (a) Company name
- (b) Address

3.2 The Contractor upon request must identify the Repair Facility and provide each of the following contact information:

- (a) Company name
- (b) Address

3.3 The Contractor upon request must identify the Calibration Facility and provide each of the following contact information:

- (a) Company name
- (b) Address

### **4.0 Performance Data**

4.1 The Contractor upon request must identify in a written statement indicating:

- (a) the seal lip material used;
- (b) the seal part number;
- (c) the grease product that is used

### **5.0 Glossary**

EC – Environment Canada  
MSC – Meteorological Service of Canada  
NRP – National Radar Program  
VSWR – Voltage Standing Wave Ratio

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## ANNEX B

### BASIS OF PAYMENT

Firm unit prices are all inclusive prices in Canadian funds, including Canadian custom duties, excise taxes, FOB Destination, 12-month warranty, maintenance and repair documentation, including all delivery charges, excluding GST/HST.

Canada reserves the right to advance or delay the optional quantities required to an earlier or later delivery date.

Delivery must be made in accordance with delivery dates below.

#### **1.0 FIRM QUANTITIES**

| 1.1 | Year | Deliver Date                         | Firm Qty | Firm Unit Price | Extended Price |
|-----|------|--------------------------------------|----------|-----------------|----------------|
|     | 1    | On or before March 31, 2015          | 15 ea.   | \$ _____        | \$ _____       |
|     | 2    | From April 1, 2015 to March 31, 2016 | 10 ea.   | \$ _____        | \$ _____       |
|     | 3    | From April 1, 2016 to March 31, 2017 | 10 ea.   | \$ _____        | \$ _____       |

**Total Firm Price \$ \_\_\_\_\_**

#### **2.0 OPTIONAL QUANTITIES**

2.1 The optional quantities may be exercised in various quantities, from time to time.

2.2 Canada may purchase any or all of the optional quantities specified below. If the option to purchase optional quantities is exercised, the pricing for the optional quantity will be the lesser of either:

a) the prices detailed below; or

b) the Contractor's published price list in effect at the time the option is exercised, less applicable quantity discount of \_\_\_\_\_%;

whichever is lower.

Note: Extended Price column will be deleted at the time of Contract Award.

| 2.3 | Year | Delivery Date                       | Optional Quantity | Firm Unit Price | Extended Price |
|-----|------|-------------------------------------|-------------------|-----------------|----------------|
|     | 1    | On or before March 31, 2015         | up to 15 ea.      | \$ _____        | \$ _____       |
|     | 2    | From April 1, 2015 - March 31, 2016 | up to 15 ea.      | \$ _____        | \$ _____       |
|     | 3    | From April 1, 2016 - March 31, 2017 | up to 15 ea.      | \$ _____        | \$ _____       |
|     | 4    | From April 1, 2017 - March 31, 2018 | up to 30 ea.      | \$ _____        | \$ _____       |
|     | 5    | From April 1, 2018 - March 31, 2019 | up to 30 ea.      | \$ _____        | \$ _____       |
|     | 6    | From April 1, 2019 - March 31, 2020 | up to 30 ea.      | \$ _____        | \$ _____       |

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**ANNEX C**  
**CERTIFICATION**

**OEM Certification Form**

This confirms that the original equipment manufacturer (OEM) identified below has authorized the Bidder named below to provide and maintain its products under any contract resulting from the bid solicitation identified below.

Name of OEM \_\_\_\_\_

Signature of authorized signatory of OEM \_\_\_\_\_

Print Name of authorized signatory of OEM \_\_\_\_\_

Print Title of authorized signatory of OEM \_\_\_\_\_

Address for authorized signatory of OEM \_\_\_\_\_

Telephone no. for authorized signatory of OEM \_\_\_\_\_

Fax no. for authorized signatory of OEM \_\_\_\_\_

Date signed \_\_\_\_\_

Solicitation Number \_\_\_\_\_

Name of Bidder \_\_\_\_\_

## ANNEX D

### TECHNICAL EVALUTION

Evaluation Phase I): Bidders must demonstrate meeting every mandatory criteria by providing proof in their bids by the bid closing date. Simply stating that the mandatory technical criteria is met or complied with is not sufficient. Failure to demonstrate meeting any of the mandatory criteria will result in the bid being deemed non-responsive and will not be considered further under Evaluation Phase II.

Evaluation Phase II): Bids deemed responsive in Evaluation Phase I will be evaluated further under Phase II Hardware Testing Evaluation. This is a Pass or Fail test and bids must meet every mandatory criterion. Proposed Rotary Joints failing to meet one or more of the requirements will be deemed non-responsive.

#### **1.0 Evaluation Phase I - MANDATORY TECHNICAL CRITERIA:**

The bidder must submit evidence for all mandatory criteria from 1.1 to 1.5 in its bid and include technical literature.

The bidder's proposed rotary joints must meet or exceed the Mandatory Technical Requirements detailed below.

| <b>1.1 Mandatory Mechanical Specifications</b> |   | <b><u>Location of supporting information in the bid. For example, page X of Document Y.</u></b> |
|--|---|---|
| <b>Item</b>                                    | <b>Description</b>  |   |
| 1  | Must maintain pressurization of $\geq 15$ PSIG  |   |
| 2  | Must be constructed of any one of the following materials:<br>d) Aluminum; or<br>e) Copper; or<br>f) Brass Alloy  |   |
| 3  | Finish must be either Chromate or Silver Plated.  |   |
| 5  | Must have a Torque Max of 5 IN-LBS  |   |
| 6  | Leakage Rate of loss must be $< 0.3$ Cubic Inches per Minute  |   |
| 7  | Must not include any body mounting flange   |   |
| 8  | Rotational Speed must be 12 RPM Minimum   |   |
| 9  | Flange Terminations on ends must have UG406B/U Choke with Qty 8 10-32 UNF Threaded holes every 45 degrees   |   |
| 10   | Bidders must provide a written statement to indicate in their submission:<br><br>(a) the seal lip material used;<br>(b) the seal part number;<br>(c) the grease product that will be used (with confirmation of compatibility).<br><br>Bidder who does not demonstrate compatibility will be considered not having met this criteria. |   |
| 11   | The Rotary Joint Bearings must have a Mean-Time-Between-Failure of 4 years or more.   |   |
| 12   | The Rotary Joint Seals must have a Mean-Time-Between-Failure of 4 years or more.  |   |

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| 1.2 Mandatory Electrical Specifications |  | Location of supporting information in the bid. For example, page X of Document Y. |
|---|--|---|
|---|--|---|

| Item | Description   |  |
|------|---|--|
| 1    | Operating Frequency must be 5.6 – 5.65 GHz                              |  |
| 2    | Minimum Peak Power must be 450 KWATTS at 0 PRESSURE (PSIG)              |  |
| 3    | Voltage Standing Wave Ratio (VSWR) must be less than or equal to 1.15:1 |  |
| 4    | Insertion Loss must be 0.10 dB Max                                      |  |
| 5    | Termination Flanges must have UG406B/U (WR187) Choke                    |  |

| 1.3 Mandatory Environmental Specifications |  | Location of supporting information in the bid. For example, page X of Document Y. |
|--|--|---|
|--|--|---|

| Item | Description  |  |
|------|--|--|
| 1    | Must continuously operate uninterrupted within the -20°C to 45°C temperature range |  |
| 2    | Storage temperature range must be -20°C to 40°C                                    |  |

| 1.4 Mandatory Bidder Certifications and Documentation |  | Location of supporting information in the bid. For example, page X of Document Y. |
|---|--|---|
|---|--|---|

| Item | Description   |  |
|------|---|--|
| 1    | Bidder must provide the Make and Model Number of the proposed Rotary Joint.   |  |
| 2    | <p>Calibration Facility Accreditation</p> <p>Bidder must provide a copy of ISO17025 certificate of authorization for the proposed Calibration Facility performing the Rotary Joint calibration – certificate must be current and valid at the time of bid closing.</p> <p>Bidders may propose an alternate accreditation issued by a non-listed authority. Calibration Accreditation provided by a different authority other than ISO authority may be deemed acceptable by Canada. Canada reserves the right to reject any proposed alternative. Bidders are strongly encouraged to inquire acceptability of equivalency during the bid period. The technical authority certificate provided must be current and valid and clearly show Calibration accreditation.</p> |  |
| 3    | The bidder must provide technical drawings or diagrams of the proposed rotary joint.  |  |
| 4    | The bidder must provide the name of two government departments or agencies, university or commercial organizations where the proposed rotary joint has been used and installed for three (3) or more years from the date of bid closing and provide each of the following   |  |

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|   |  |  |
|---|--|--|
|   | <p>contact information:</p> <p>(a) The name and contact information of the organization stated</p> <p>(b) A reference/contact person.</p> <p>Canada reserves the right to contact the reference to verify the information provided.</p> <p>The reference will be contacted for verification purposes. If the reference contact person cannot be reached after three (3) attempts, the bid will be deemed non-responsive.</p> |  |
| 5 | The bidder must provide Mean Time Between Failure (MTBF) data, either from the Bidder's Return and Repair statistics, (preferred) OR as per the U.S. Military Handbook 217, Revision E, Notice 1.  |  |
| 6 | The bidder must provide Mean Time Between Failure (MTBF) data, either from the Bidder's Return and Repair statistics, (preferred) OR as per the U.S. Military Handbook 217, Revision E, Notice 1.  |  |
| 7 | The bidder must provide description of how the MTBF was calculated. (including applicable formulae)  |  |

| 1.4 Performance Specifications |  | Location of supporting information in the bid. For example, page X of Document Y. |
|--------------------------------|--|---|
| Item                           | Description  |   |
| 1                              | <p>Bidders must provide performance data illustrating measured results for their proposed product. This data must show:</p> <p>(a) the Insertion Loss over the operating Frequency Range</p> <p>(b) the expected Voltage Standing Wave Ratio (VSWR) versus the entire 360 degree rotational angle</p> <p>(c) the maximum Radio Frequency (RF) power level that can pass through the device</p> |   |

| 1.5 Mandatory Samples and Hardware Testing |  | Location of supporting information in the bid. For example, page X of Document Y. |
|--|--|---|
| Item                                       | Description  |   |
| 1  | <p>Bidders must provide two units of their proposed Rotary Joints free of charge to be used as samples for the purpose of technical evaluation.</p> <p>Bidders must submit with their bid by Bid Closing Date and Time, a copy of documentation that shows that the sample rotary joints were shipped to MSC prior to Bid Closing Date and</p> |   |

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|  |  |  |
|--|--|--|
|  | <p>Time. Acceptable documentation includes a courier slip, a Canada Post Corporation (CPC) Priority Courier Bill of Lading, or a CPC Xpresspost Label.</p> <p>The rotary joint samples must be identified with "Requisition Number K3D33-131018" and be delivered to:</p> <p>Environment Canada<br/>Attn: Chief Radar Operations / National Radar Network<br/>Meteorological Services of Canada<br/>4905 Dufferin Street<br/>Toronto, Ontario<br/>Canada M3H 5T4</p> |  |
|--|--|--|

## **2.0 Phase II - Submitting Samples and Hardware Testing**

2.1 Canada will, if requested by the bidder, return sample rotary joints to the bidder using standard commercial shippers. Canada will not be responsible for the condition of the submitted rotary joints upon arrival. Canada will not be held responsible for the functionality of the samples during or after the Hardware Testing.

### **2.2 Hardware Testing**

2.2.1 Only bids deemed responsive against all of the Mandatory Technical Criteria in Phase I will be evaluated.

2.2.2 One of the two Rotary Joints Samples submitted by the bidder will be measured against specific parameters detailed below in order to verify the information provided by the Bidder and to confirm the proposed rotary joint's functionality.

2.2.3 For Test Categories 1.1- Physical Dimensions and 1.2 – Physical Implementation, Canada will randomly select one of the two rotary joint samples for testing. Should measurements from one of the two sample rotary joints be found out of tolerance, the same test using the bidder's second supplied rotary joint will be repeated. A repeat intolerant value from the second sample rotary joint will render the bid non-responsive against the tested category and the bid will not receive any further consideration and will not be evaluated against Test Categories 2.1 and 2.2 – Electronic Verification Testing. If during a repeat test, the result from the second rotary joint sample is within tolerance, the initial test from the first rotary joint sample will be considered invalid and the tolerance value produced by the second rotary joint sample will be considered for that specific test category.

2.2.4 The Hardware Testing evaluation is a Pass or Fail test. Failure of the bidder's sample to meet all the identified performance conditions detailed below will render the bid non-responsive and not be further considered.



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| Test Categories   | Test Description  |
|---|---|
| <b>Mechanical Verification &amp; Testing</b>  |   |
| Two tests (1.1 and 1.2) will be completed to verify mechanical characteristics of submitted sample. Any sample which cannot be tested for the specific description will be deemed non-responsive and not be assessed any further. |   |
| <b>1.1 Physical Dimensions</b>  | The submitted product sample will be measured against the identified specification as found in Annex A Requirement – Technical Specifications. The sample will pass if all actual measurements are within stated tolerances per drawing (Annex – Figure 1).   |
| <b>1.2 Physical Implementation</b><br><br>- Test Category 1.2 will be evaluated only if the proposed rotary joint meets and pass test category 1.1 and 2.1.   | Canada will mount the submitted sample at an EC Radar site to confirm the proposed rotary joint may be installed into the required location without modification. The proposed rotary joint must operate for a 30 day trial period, and withstand installation and regular scanning cycle of the Radar system without affecting Radar Data or resulting in any performance degradation. |
| <b>Electronic Verification &amp; Testing</b>  |   |
| Two tests (2.1 and 2.2) will be completed to verify electronic characteristics of submitted sample. Any sample which cannot be tested for the specific description will be deemed non-responsive and not be assessed any further. |   |
| <b>2.1 Verification of technical documents submitted in section 3.0 of the Bidder Certifications and Documentation</b>  | The submitted samples will be installed in active radar equipment by Canada who upon installation will verify:  |
|   | (A) The insertion loss is measured to within 5% of the technical specifications in Annex A.   |
|   | (B) The insertion loss does not increase existing waveguide loss by more than 10%   |
|   | (C) The VSWR (Voltage Standing Wave Ratio) does not increase existing measured VSWR by more than 10% and exceeds 1.3 to 1 max.  |
|   | (D) There is no Radio Frequency (RF) arcing when the radar equipment is operating at maximum RF power of 250 KWatts   |
|   | (E) The unit maintains waveguide air pressurization and does not leak air one hour after installation   |

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|                                   |   |
|-----------------------------------|---|
| <b>2.2 Implementation Testing</b> | Parameters (A), (B), (C), (D) and (E) above will be measured again after a 30 day trial period in accordance to Test Categories 1.2. Sample will be considered "Passed" if all measurements are repeated or within 10% of installed values. |
|-----------------------------------|---|