



TENDER DOCUMENT

FOR

**PROCUREMENT OF VTOL AUTONOMOUS UNMANNED AERIAL VEHICLE SYSTEM
FOR CARRYING 111KG PAYLOAD.**

**COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH
NATIONAL AEROSPACE LABORATORIES
PB NO.1779, HAL AIRPORT ROAD, BENGALURU – 560017
KARNATAKA-INDIA**



Council of Scientific and Industrial Research
National Aerospace Laboratories
PB No.1779, HAL Airport Road, Bengaluru – 560 017, Karnataka-India
Tel #: 00 91 80 25086040/6041
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Invitation for Bids / Notice Inviting Tender

CSIR- National Aerospace Laboratories (NAL), Bengaluru, India is one of the premier laboratories under Council of Scientific and Industrial Research, an autonomous body under Department of Scientific and Industrial Research (Government of India), New Delhi. CSIR-NAL is a Science and Knowledge based Research, Development and Consulting Organization. It is internationally known for its excellence in Scientific Research in Aerospace Engineering.

The Director, CSIR-NAL invites sealed bids from their Manufacturers, their distributors and Indian Agent of Foreign Principals, if any, for the procurement of the following Goods/Services for its day-to-day research. The Technical specifications, Allied requirements and scope of supply are given in **Chapter 4** appended herewith.

Sr. No.	Tender No.	Brief Description of item(s)	Unit	Quantity	Single / Two Bid
1	NAL/PUR/MAV/098/18-Z	Procurement of VTOL Autonomous Unmanned Aerial Vehicle System for Carrying 111kg payload.	No	1	Two

1. The address for submission of bids and for obtaining further information:
Controller of Stores & Purchase
Purchase Section
CSIR- National Aerospace Laboratories
PB No.1779, HAL Airport Road, Kodihalli, Bengaluru – 560017
Karnataka-India
Tel # : 080 25086040/6041/6044
Fax # : 080 25269611
Email : purchasek@nal.res.in, mkala@nal.res.in
2. The bidding documents can be downloaded free of cost directly from Central Public Procurement Portal (CPPP) of Government of India website <http://eprocure.gov.in/epublish/app> and CSIR-NAL Website www.nal.res.in.
3. A Pre-bid Conference will be held on schedule mentioned below. All prospective bidders are requested to kindly submit their queries to the address indicated above so as to reach the Stores & Purchase Officer at least one day before Pre-Bid Conference.

	Date	Time in hours (IST)	Venue
Pre-Bid Conference	12-Feb-2019	15:00 Hrs	FMCD Conference Hall

4. Bidder can **also** attend the Pre-bid through **SKYPE** on the said date and time as scheduled below:

	Date	Time in hours (IST)	Skype Address
Pre-Bid Conference through SKYPE	12-Feb-2019	15:00 Hrs	uav.csirnal@gmail.com

5. The Bid prepared by the Bidder shall include the following: -

Bid Security (BS) / Earnest Money Deposit (EMD)		
a)	In case of Foreign Bidder	In case of Indigenous Bidder
	US\$ 8100/- [US\$ Eight Thousand One Hundred Only]	Rs. 5,75,000/- [Rupees Five Lakh Seventy-Five Thousand Only]
	Euro 7100/- [Euro Seventy Thousand One Hundred Only]	
b)	Form as specified in Chapter No.8	

6. All Bids must be accompanied by a Bid Security/EMD as specified above and must be delivered to the above office at the date and time indicted below.
7. Bids will be opened in the presence of Bidders' representatives who choose to attend on the specified date and time. In the event of the date specified for bid receipt and opening being declared as a closed holiday, the due date for submission of bids and opening of bids will be the following working day at the appointed time.
8. The Schedule for Submission of Bids and Opening of Bids is as follows: -

Date & Time of Submission of Bid		Date and Time of Opening of Bid (Part-I – Technical Bid Only)		Venue
Date	Time (IST)	Date	Time (IST)	As detailed at Sr. No.1
01-Mar-2019	10:00 Hrs	01-Mar-2019	11:00 Hrs	

9. The Director, CSIR-National Aerospace Laboratories (NAL), Bengaluru, India reserves the right to accept or reject any or all tenders either in part or in full or to annul the tender process at any stage or to split the order without assigning any reasons there for.

CONTENTS OF TENDER / BIDDING DOCUMENT

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LIST OF SHORT FORMS AND FULL FORMS

ACRONYM	EXPANSION
BG	BANK GUARANTEE
BS	BID SECURITY
CIF	COST INSURANCE FREIGHT
CIP	CARRIAGE PAID TO
CSIR	COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH
CVC	CHIEF VIGILANCE COMMISSION
DGS&D	DIRECTOR GENERAL OF SUPPLIES & DISPOSAL
EMD	EARNEST MONEY DEPOSIT
ESIC	EMPLOYEES STATE INSURANCE CORPORATION
FCA	FREE CARRIAGE ALONG SIDE
FOB	FREE ON BOARD
GCC	GENERAL CONDITIONS OF CONTRACT
GOI	GOVERNMENT OF INDIA
GST	GOODS & SERVICES TAX
IT	INCOME TAX
ICC	INTERNATIONAL CHAMBERS OF COMMERCE
IEMs	INDEPENDENT EXTERNAL MONITORS
IP	INTEGRITY PACT
IPC	INDIAN PENAL CODE
IST	INDIAN STANDARD TIME
ITB	INSTRUCTION TO BIDDER
JS (A)	JOINT SECRETARY (ADMINISTRATION)
LC	LETTER OF CREDIT
LC	LETTER OF CREDIT
LD	LIQUIDATED DAMAGES
MSME	MICRO, SMALL, MEDIUM ENTERPRISES
NAL	NATIONAL AEROSPACE LABORATORIES
NIT	NOTICE INVITING TENDER
PS	PERFORMANCE SECURITY
SCC	SPECIAL CONDITIONS OF CONTRACT
UNCITRAL	UNITED NATIONS COMMISSION ON INTERNATIONAL TRADE

CHAPTER 1 - INSTRUCTIONS TO BIDDERS - Table of Contents

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A. Introduction

Instructions to bidder are broad guidelines to be followed while formulating the bid and its submission to the Purchaser. It also describes the methodology for opening and evaluation of bids and consequent award of contract.

1.1 Eligible Bidders

- 1.1.1. This Invitation for Bids is open to all Bidders.
- 1.1.2. Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Purchaser to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation of Bids.
- 1.1.3. Bidders who fulfil the Eligibility Criteria mentioned in **Chapter 5** will be considered for Technical Evaluation of bids.

1.2 Cost of Bidding

- 1.2.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and "the Purchaser", will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

1.3 Fraud and corruption

- 1.3.1. The purchaser requires that the bidders, Bidders and contractors observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy, the following are defined:

Sr. No.	Term	Meaning
(a)	Corrupt practice	The offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution.
(b)	Fraudulent practice	a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract.
(c)	Collusive practice	means a scheme or arrangement between two or more bidders, with or without the knowledge of the purchaser, designed to establish bid prices at artificial, non-competitive levels.
(d)	Coercive practice	means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract.

- 1.3.2. The Purchaser will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question.

B. The Bidding Documents

1.4 Cost of Bidding Documents

- 1.4.1. Interested eligible bidders may purchase the bidding documents on payment of the cost of bidding documents as indicated in the Invitation for bids / NIT **or alternatively**, the bidding documents can be downloaded from our Website as indicated in the Invitation for Bids / NIT **free of cost**.

1.5 Content of Bidding Documents

- 1.5.1. The Goods / Services required, bidding procedures and contract terms are prescribed in the bidding documents which should be read in conjunction. The bidding documents, apart from the Invitation for Bids / Notice Inviting Tender have been divided into **Eight Chapters**.

- 1.5.2. The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents.
- 1.5.3. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in rejection of its bid.

1.6 Clarification of bidding documents

1.6.1 In case when there is NO PRE-BID CONFERENCE

A prospective Bidder requiring any clarification of the Bidding Documents shall contact the Purchaser in writing at the Purchaser's address specified in the Special Conditions of Contract (SCC). The Purchaser will respond in writing to any request for clarification, provided that such request is received not later than ten (10) days prior to the due date for submission of bids. The Purchaser shall host the response on its website, including a description of the inquiry but without identifying its source. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under **Clause 1.7** relating to amendment of bidding documents and **Clause 1.19** relating to Due date for Submission of Bids. The clarifications and amendments issued would also be hosted on the website of the purchaser for the benefit of the prospective bidders who are expected to take cognizance of the same before formulating and submitting their bids.

1.6.2. In case when there is PRE-BID CONFERENCE

- a) A prospective Bidder requiring any clarification of the Biding Documents shall contact the Purchaser in writing at the Purchaser's address specified in the Special Conditions of Contract (SCC), latest by the date specified in the Invitation for Bids / NIT which would be deliberated as per **Clause 1.6.2 (b)** of Instructions to the Bidders. No request for clarification or query shall be normally entertained after the Pre-Bid Conference. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under **Clause 1.7** relating to amendment of Bidding Documents and **Clause 1.19** relating to Due Date for Submission of Bids. The clarifications and amendments issued would also be hosted on the website of the Purchaser for the benefit of the other prospective bidders.
- b) A Pre-bid Conference shall be held as indicated in Invitation to Bid. All prospective bidders are requested to kindly attend the Pre-bid Conference. In order to facilitate CSIR-NAL for proper conduct of the Pre-bid Conference, all prospective bidders are requested to kindly submit their queries (with envelope bearing Tender No. and Date on top and marked "Queries for Pre-bid Conference") so as to reach CSIR-NAL as indicated in Invitation to Bid. CSIR-NAL shall answer the queries during the pre-bid conference, which would become a part of the proceedings of the Pre-bid Conference. These proceedings will become a part of clarifications / amendments to the bidding documents and would become binding on all the prospective bidders. These proceedings would also be hosted on **CSIR-NAL website www.nal.res.in** for the benefit of all the prospective bidders. Before formulating and submitting their bids, all prospective bidders are advised to surf through the CSIR-NAL website after the Pre-Bid Conference, in order to enable them take cognizance of the changes made in the bidding document.

1.7 Amendment to Bidding Documents

- 1.7.1. At any time prior to the due date for submission of bids, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by amendment.
- 1.7.2. All prospective bidders who have down loaded/received the Tender Documents should surf our website from time to time to know about the changes/modifications in the Tender Document before formulating and submitting their bids to take cognizance of the amendments.
- 1.7.3. In order to allow prospective bidders reasonable time to take the amendment into account while formulating their bids, the Purchaser, at its discretion, may extend the due date for the submission of bids and host the changes on the website of the purchaser.

C. Preparation of bids

1.8 Language of Bid

- 1.8.1. The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in English language only especially when the details are technical. However, if GOI makes it mandatory under Rajbhasha Abhiyan, in that case views of Rajbhasha unit of CSIR may be sought.
- 1.8.2. The Bidder shall bear all costs of translation, if any, to the English language and bear all risks of the accuracy of such translation, for documents provided by the Bidder.

1.9 Documents Comprising the Bid

- 1.9.1. The bid prepared by the Bidder shall include:

(a)	Bid security as specified in the Invitation to Bids	Clause No.1.15
(b)	Bidder Information Form	Chapter-8, Annexure-B
(c)	Manufacturer's Authorization Form	Chapter-5, Clause No.5.2(a), Annexure-D
(d)	Documents required to fulfil Eligibility and Qualification criteria	As per Chapter-5
(e)	Detailed Technical Specification and Scope of Supply	As per Chapter-4
(f)	Schedule of Requirements	As per Chapter-3
(g)	Performance Statement Form	Chapter-5, Clause No.5.2(b), Annexure-E
(h)	Service support details form	Chapter-5, Clause No.5.2(c), Annexure-F
(i)	Deviation Statement Form	Chapter-5, Annexure-J (Part I & II)
(j)	Bid form	Chapter-8, Annexure-C
(k)	Price Schedule Form(s)	Chapter-6

The documents comprising bid should be submitted in the **above sequence in orderly manner**.
Bid is Single Bid or Two Bid is specified in NIT.

1.9.2 Documents comprising Single Bid

All the above documents should be submitted in Single

1.9.3 Documents comprising Two Bid (Techno-Commercial Unpriced Bid /Technical Bid & Price Bid)

(a)	Technical Bid	(i)	Should comprise of documents listed from Sr.No.a to l.
		(ii)	Bid Form & Price Schedule Form without mentioning prices and discount
(b)	Price Bid	(i)	Should comprise of Bid Form & Price Schedule Form by mentioning prices and discount
		(ii)	Price Bid submitted in any other format will be summarily rejected

1.10 Bid form and Price Schedule

- 1.10.1 The bidder shall complete the Bid Form and the appropriate Price Schedule form as given in Chapter-8 and Chapter-6 respectively furnished in the bidding documents. These forms must be completed without any alterations to its format and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested. The Bid Form and the appropriate Price Schedule form shall be submitted in accordance with **ITB Clauses 1.9.2 & 1.9.3** of the bidding documents.

1.11 Bid Prices

- 1.11.1. The Bidder shall indicate on the appropriate price schedule form, the unit prices and total bid prices of the Goods / Services it proposes to supply under the contract.
- 1.11.2. Prices indicated on the price-schedule form shall be entered separately in the following manner:

(a) **For Goods manufactured within India:**

i)	The price of the goods quoted Ex-works
ii)	GST which will be payable on the goods if the contract is awarded.
iii)	The charges for inland transportation, insurance and other local services required for delivering the goods at the desired destination as specified in the price schedule form.
iv)	The installation, commissioning and training charges including any incidental services, if any.

(b) **For Goods manufactured abroad:**

i)	The price of the goods, quoted on FCA (named Airport abroad) or FOB (named port of shipment), as specified in the price schedule form.
ii)	The charges for insurance and transportation of the goods to the port / place of destination.
iii)	The agency commission charges payable to Indian agent in Indian rupees, if any.
iv)	The installation, commissioning and training charges including any incidental services, if any

- 1.11.3. The terms FOB, FCA, CIF, CIP etc. shall be governed by the rules prescribed in the current edition of the Incoterms published by the International Chambers of Commerce, Paris.
- 1.11.4. The price quoted shall remain fixed during the contract period and shall not vary on any account.
- 1.11.5. All lots and items must be listed and priced separately in the Price Schedules. If a Price Schedule shows items listed but not priced, their prices shall be assumed to be included in the prices of other items. Lots or items not listed in the Price Schedule shall be assumed to be not included in the bid.
- 1.11.6. Custom Duty is levied on all import meant for CSIR-NAL. Hence, the Bidders are requested to quote only on FOB/FCA basis, freight, insurance and custom duty as applicable to R&D Institutions will be paid by the Purchaser.
- 1.11.7. The CSIR-NAL is a public funded Research Institution under Department of Scientific & Industrial Research and concessional Custom Duty @ 5.15% is applicable for the goods purchased for research purpose vide Government of India Notification No.51/96-Customs dated 23.07.1996
- 1.11.8. In case of imports the freight & insurance will be paid by the Purchaser, as the consignments are to be shipped through the Purchaser nominated freight forwarder.
- 1.11.9. The quotation should be only in Indian Rupees for indigenous items. In case of foreign quote, the Bidders may quote their rates in Indian Rupees as well as in Foreign Currency.
- 1.11.10. In case of INR bids the price criteria should be on Free Delivery to CSIR-NAL, Bengaluru. Govt. Levies like GST etc., if any, shall be paid at actual rates applicable on the date of delivery. Rates should be quoted accordingly giving the basic price, GST etc., if any.
- 1.11.11. **Taxes:** If there is no explicit mention about taxes in your offer, then quoted price will be **deemed inclusive** of all such taxes and no other charges except those mentioned clearly in the quotation will be paid.
- 1.11.12. **Where there is no mention of packing, forwarding, freight, insurance charges, taxes, any charges mentioned as extras as applicable etc.; or tax at your account or tax to be borne by the Buyer, such offer may be rejected as incomplete.**
- 1.11.13. CSIR-NAL is a public funded Research Institution under Department of Scientific & Industrial Research and concessional GST (IGST @ 5% OR SGST @ 2.5% and [CGST @ 2.5%](#)) shall be made applicable for the goods purchased for research purpose vide Ministry of Finance (Department of Revenue) Notification No.47/2017-Integrated Tax dated 14.11.2017 & Notification No.45/2017-Central Tax dated 14.11.2017 in due course of time. Till such time GST as applicable shall be paid.
- 1.11.14. All payments due under the contract shall be paid after deduction of statutory levies at source wherever applicable.

1.12 Bid Currencies

- 1.12.1 Prices shall be quoted in Indian Rupees for offers received for supply within India and in freely Convertible foreign currency in case of offers received for supply from foreign countries.

1.13 Documents Establishing Bidder's Eligibility and qualifications

- 1.13.1. The bidder shall furnish, as part of its bid, documents establishing the bidders' eligibility to bid and its qualification to perform the contract if its bid is accepted.
- 1.13.2. The documentary evidence of the bidders' qualification to perform the contract if the bid is accepted shall establish to the purchasers' satisfaction that:

(a)	The bidder meets the qualification criteria listed in bidding documents, if any.
(b)	Bidder who doesn't manufacture the goods it offers to supply shall submit Manufacturers' Authorization Form using the form specified in the bidding document to demonstrate that it has been duly authorized by the manufacturer of the goods to quote and / or supply the goods.
(c)	In case a bidder not doing business within India, it shall furnish the certificate to the effect that the bidder is or will be represented by an agent in India, equipped and able to carry out the supply, maintenance, repair obligations etc. during the warranty and post warranty period or ensure a mechanism at place for carrying out the supply, maintenance, repair obligations etc. during the warranty and post-warranty period.

- 1.13.3. Conditional tenders / offers shall **not** be accepted.

1.14 Documents Establishing Goods' Eligibility and Conformity to Bidding Documents

- 1.14.1. To establish the goods' eligibility, the documentary evidence of the goods and services eligibility shall consist of a statement on the country of origin of the goods and services offered which shall be confirmed by a certificate of origin at the time of shipment.
- 1.14.2. To establish the conformity of the goods and services to the specifications and schedule of requirements of the bidding document, the documentary evidence of conformity of the goods and services to the bidding documents may be in the form of literature, drawings and data, and shall consist of:

(a)	A detailed description of the essential technical and performance characteristics of the goods;
(b)	A list giving full particulars, including available sources and current prices, of spare parts, special tools, etc., necessary for the proper and continuing functioning of the goods during the warranty period following commencement of the use of the goods by the Purchaser in the Price- bid ; and
(c)	An item-by-item commentary on the Purchaser's Technical Specifications demonstrating substantial responsiveness of the goods and services to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications.

- 1.14.3. For purposes of the commentary to be furnished pursuant to above, the Bidder shall note that standards for workmanship, material and equipment, designated by the Purchaser in its Technical Specifications are intended to be descriptive only and not restrictive. The Bidder may substitute these in its bid, provided that it demonstrates to the Purchaser's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.

1.15 Bid Security (BS) / Earnest Money Deposit (EMD)

- 1.15.1 E-Bids submitted without BS/EMD will stand rejected. BS/EMD will not be accepted in the form of cash / cheque or any other form other than DD/Bank Guarantee as per format given in Chapter-8: **Annexure A**. No interest is payable on BS/EMD.

- 1.15.2 The Bidder shall furnish, as part of its bid in one of the following forms at the Bidder's option:

(a)	A Bank Guarantee (BG) issued by a Nationalized bank in the form provided in the bidding documents and valid for 45 days beyond the validity of the bid
(b)	In case a Bidder desired to submit a BG issued from a Foreign Bank, then the same should be confirmed by a Nationalised Indian Bank

(c)	A Bankers cheque or Demand Draft or TDR
(d)	BS/EMD in in favour of “ Director, National Aerospace Laboratories ” issued by any Nationalized Bank

A. In case of Foreign Bidder(s):

a)	The BS shall be submitted either by the principal or by the Indian agent
b)	The bidder who submits the tender on behalf of their principals should produce documentary evidence in support of their authority to quote
c)	The Bank Guarantee is insisted due to steep fluctuations in foreign exchange hence the foreign DDs are not accepted towards BS/EMD

B. In the case of indigenous bidders:

a)	The BS shall be submitted by the manufacturer or their specifically authorized dealer/bidder
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1.15.3 The bid security is required to protect the Purchaser against the risk of Bidder's conduct, which would warrant the Bid security's forfeiture.

1.15.4 The bid security shall be in Indian Rupees for offers received for supply within India and denominated in the currency of the bid or in any freely convertible foreign exchange in the case of offers received for supplies from foreign countries in equivalent Indian Rupees. The bid security shall be in one of the following forms at the bidders' option:

(a)	A Bank Guarantee (BG) issued by a Nationalized Bank / Foreign Bank operating in India in the form provided in the bidding documents and valid for 45 days beyond the validity of the bid. In case a bidder desires to submit a BG issued from a foreign bank, then the same should be confirmed by a Nationalised / Scheduled Indian bank; OR
(b)	A Banker's cheque or demand draft in favour of the Purchaser issued by any Nationalised Bank.

1.15.5 The bid security shall be payable promptly upon written demand by the purchaser in case the conditions listed in the **ITB clause 1.15.11** are invoked.

1.15.6. The bid security should be submitted in its original form to the address:

STORES & PURCHASE OFFICER,
CSIR-NATIONAL AEROSPACE LABORATORY
PB NO.1779, HAL AIRPORT ROAD, KODIHALLI,
BENGALURU - 560017
KARNATAKA-INDIA

Scanned Copy of Demand Draft/Bank Guarantee towards bid security should be uploaded along with the E-bid.

1.15.7. Bid security / EMD is the mandatory requirement and exemption is applicable to the firms registered with MSME only for the manufacture of the tendered goods and not for selling products manufactured by other companies.

1.15.8. The Bid Security of unsuccessful bidder will be discharged / returned as promptly as possible but positively within a period of 30 days after the expiration of the period of bid validity or placement of order whichever is later, without any interest.

1.15.9. The successful Bidder's bid security will be discharged upon the Bidder furnishing the Performance Security, without any interest. Alternatively, the BS could also be adjusted against Performance Security, if it is paid through Demand Draft / Banker's Cheque.

1.15.10. The receipt of Bid security before time and date of submission of bid is mandatory requirement. The bid is liable to be rejected if the bid security is not received within stipulated time.

1.15.11. The bid security may be forfeited:

(a)	If Bidder withdraws or amends or modifies or impairs or derogates its bid during the period of bid validity specified by the Bidder on the Bid Form; OR
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(b)	In case of successful Bidder, if the Bidder fails to furnish order acceptance within 15 days of the order or fails to sign the contract and / or fails to furnish Performance Security within 21 days from the date of contract / order.
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1.15.12. Whenever the bidder chooses to submit the Bid Security in the form of Bank Guarantee, then he should advise the banker issuing the Bank Guarantee to immediately send by Registered Post (A.D.) an unstamped duplicate copy of the Guarantee directly to the Purchaser with a covering letter to compare with the original BG for the correctness, genuineness, etc.

1.16 Period of Validity of Bids

1.16.1. Bids shall remain valid for minimum of 90 days after the date of bid opening prescribed by the Purchaser. A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.

1.16.2. In exceptional circumstances, the Purchaser may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing (or by fax or e-mail). The bid security provided shall also be suitably extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required nor permitted to modify its bid.

1.16.3. Bid evaluation will be based on the bid prices without taking into consideration the above corrections.

1.17 Format and Signing of Bid

1.17.1. The bids may be submitted as Single-bid or Two-bid as specified in the Invitation for Bids / NIT.

1.17.2. In case the bids are invited on single bid basis, then the Bidder shall submit E-bid comprising all documents listed under clause 1.9 relating to documents comprising the bid.

1.17.3. In case the bids are invited on two-bid system, the Bidder shall submit E-bid in two separate parts.

(a)	First Part	shall contain Techno-Commercial Bid/Technical Bid comprising all documents listed under clause relating to Documents Comprising the Bid excepting Bid Form and Price Schedule Form
(b)	Second Part	shall contain the Price-Bid comprising Bid Form and Price Schedule form.

1.17.4. The scanned copies of the E-bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the Contract. All pages of the bid, except for un-amended printed literature, shall be initialled by the person or persons signing the bid.

1.17.5. Any interlineations, erasures or overwriting shall be valid only if they are initialled by the person or persons signing the bid.

D. Submission and sealing of Bids

1.18 Submission, Sealing and Marking of Bids

1.18.1. The bidders may submit their duly sealed bids generally by post or by hand.

1.18.2. Sealing of Bids in the case of bids invited on Single Bid Basis:

The Bidder shall mark the Bids as "Original" and "Copy". The Original and copy bids shall be sealed in an envelope.

1.18.3. Sealing of Bids in the case of Bids invited on **Two Bid basis:**

a)	Technical Bid should contain documents as listed in ITB Clause 1.9 without mentioning prices on Bid Form and Price Schedule Form(s). The Bidder shall seal the Original Bid and Copy Bid, duly marking the Bids as "Original" and "Copy". The Original and Copy Bids shall then be sealed in the First Envelope marked as Technical Bid .
b)	Price Bid should contain Bid Form and Price Schedule Form(s) with Rates/Prices filled in. Price Bid should be sealed in the Second Envelope and marked as Price Bid .
c)	Two sealed envelopes (Technical and Price Bid(s)) should be placed in the main envelope.

1.18.4. Marking of Envelopes:

a)	The inner and outer envelopes shall be addressed to the Purchaser indicated in the Special Conditions of Contract (SCC)
b)	The name and address of Bidder, Tender No., due date and warning “Do not open before” to be completed with the time and date as specified in the Invitation for bids.
c)	All envelopes should be superscribed with: <ul style="list-style-type: none"> • Tender Number..... • Due Date..... Time..... • Name of the Bidder..... • Addressed to: The Director CSIR-National Aerospace Laboratories PB NO.1779, Kodihalli, HAL Airport Road Bengaluru – 5600017 Karnataka-India

1.18.5. If the outer envelope is not sealed and marked as required above, the Purchaser will assume no responsibility for the bid's misplacement or premature opening of the submitted bid. In such cases, bids received in open condition within the due date and time will be accepted at the risk of the bidder if the same is presented to the Sr. Controller of Stores & Purchase before expiry of the due date and time of opening of the bids.

1.18.6. Firms submitting bids in a single envelope against the requirement of two-bid system would be considered for further evaluation at the risk & responsibility of the bidder. However, the opened priced bid would be sealed immediately by the Tender Opening Committee without disclosing the price.

1.19. Due date for Submission of Bids

1.19.1. Bids must be received by the Purchaser at the address specified in SCC not later than the time and date specified in NIT. In the event of the specified date for the submission of Bids being declared a holiday for the Purchaser, the Bids will be received up to the appointed time on the next working day.

1.19.2. The Purchaser may, at its discretion, extend the due date for submission of bids by amending the bid documents in accordance with Clause relating to Amendment of Bidding Documents in which case all rights and obligations of the Purchaser and Bidders previously subject to the due date will thereafter be subject to the due date as extended.

1.20. Late Bids

1.20.1. Any bid received by the Purchaser after the due date for submission of bids prescribed by the Purchaser will be rejected.

1.20.2. Such tenders shall be marked as late and not considered for further evaluation. They shall not be opened at all and be returned to the bidders in their original envelope without opening.

1.21 Withdrawal, Substitution and Modification of Bids

1.21.1. A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written notice in accordance with **ITB Clause 1.18** duly signed by an authorized representative, and shall include a copy of the authorization in accordance with **ITB Clause 1.17.4** (except that no copies of the withdrawal notice are required). The corresponding substitution or modification of the bid must accompany the respective written notice. All notices must be:

(a)	Submitted in accordance with ITB Clauses 1.17 and 1.18 (except that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked “WITHDRAWAL,” “SUBSTITUTION,” or “MODIFICATION”; and
(b)	Received by the Purchaser prior to the due date prescribed for submission of bids, in accordance with ITB Clause 1.19 .

1.21.2. Bids requested to be withdrawn in accordance with **ITB Clause 1.21.1** shall be returned unopened to the Bidders. No bid may be withdrawn, substituted, or modified in the interval between the due date for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Form or any extension thereof.

E. Opening and Evaluation of Bids

1.22 Opening of Bids by the Purchaser

- 1.22.1. The Purchaser will open all bids one at a time in the presence of bidders' authorized representatives who choose to attend, as per the schedule given in Invitation for Bids. The Bidders' representatives who are present shall sign the quotation opening sheet evidencing their attendance. In the event of the specified date of Bid opening being declared a holiday for the Purchaser, the Bids shall be opened at the appointed time and location on the next working day. In case of two-bid, the financial bid shall be opened only after technical evaluation.
- 1.22.2. First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to the Bidder. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening. Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding Bid being substituted, and the substituted Bid shall not be opened, but returned to the Bidder. No Bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at bid opening. Envelopes marked "MODIFICATION" shall be opened and read out with the corresponding Bid. No Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Bid opening. Only envelopes that are opened and read out at Bid opening shall be considered further.
- 1.22.3. The bidders' names, bid modifications or withdrawals, bid prices, discounts, and the presence or absence of requisite bid security and such other details as the Purchaser, at its discretion, may consider appropriate, will be announced at the opening. No bid shall be rejected at bid opening, except for late bid(s). The contents of the bid forms and price schedule form would however be announced only at the time of opening of Priced-bids in the case of two-bid system.
- 1.22.4. Bids that are received late shall not be considered further for evaluation, irrespective of the circumstances.
- 1.22.5. Bidders interested in participating in the bid opening process, should depute their representatives along with an authority letter to be submitted to the Purchaser at the time of bid opening.

1.23. Confidentiality

- 1.23.1. Information relating to the examination, evaluation, comparison, and post qualification of bids, and recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with such process until Award of the Contract.
- 1.23.2. Any effort by a Bidder to influence the Purchaser in the examination, evaluation, comparison, and post qualification of the bids or contract award decisions may result in the rejection of its Bid.

1.24 Clarification of Bids

- 1.24.1. To assist in the examination, evaluation, comparison and post qualification of the bids, the Purchaser may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing and no change in prices or substance of the bid shall be sought, offered or permitted. However, no negotiation shall be held except with the lowest bidder, at the discretion of the purchaser.
- 1.24.2. Any clarification submitted by a bidder in respect to its bid which is not in response to a request by the purchaser shall not be considered. However, no post Bid clarifications at the initiative of the Bidder shall be entertained.

1.25 Preliminary Examination

- 1.25.1. The Purchaser shall examine the bids to confirm that all documents and technical documentation requested in **ITB Clause 1.9** have been provided, and to determine the completeness of each document submitted.
- 1.25.2. The Purchaser shall confirm that the following documents and information have been provided in the Bid. If any of these documents or information is missing, the offer shall be rejected.

- (a) All the tenders received will first be scrutinized to see whether the tenders meet the basic requirements as incorporated in the tender enquiry document. The tenders, who do not meet the basic requirements, will be treated as non-responsive and ignored. The following are some of the important points, for which a tender may be declared as non-responsive and will be ignored, during the initial scrutiny:

a)	The Bid is unsigned
b)	The Bidder is not eligible
c)	The requisite EMD is not furnished or the bid validity is shorter than the required period.
d)	The Bidder has quoted for goods manufactured by a different firm without the required authority letter from the proposed manufacturer
e)	Bidder has not agreed to give the required performance security
f)	The goods quoted are sub-standard, not meeting the required specification, etc.
g)	The bidder has not quoted for the entire requirement as specified in Chapter 4 (Scope of Supply)
h)	The bidder has not agreed to some essential condition(s) incorporated in the tender.
i)	If there is inconsistency between the Techno-Commercial Bid and Price Bid information / details.
j)	If the bidder has suppressed any material information / fact having relevance to the submitted bid or bidder performance.
k)	OTHER POINTS OF SUMMARY REJECTION ARE ALSO MENTIONED IN THIS CHAPTER AND UNDER ELIGIBILITY CONDITIONS

- (b) Bid Form and Price Schedule Form, in accordance with **ITB Clause 1.10**. In case of two-bid system these forms shall be examined after opening of the Price Bids of the technically qualified bidders.

1.26 **Responsiveness of Bids**

- 1.26.1. Prior to the detailed evaluation, the purchaser will determine the substantial responsiveness of each bid to the bidding documents. For purposes of this clause, a substantive responsive bid is one, which conforms to all terms and condition of the bidding documents without material deviations, reservations or omissions. A material deviation, reservation or omission is one that:

(a)	affects in any substantial way the scope, quality, or performance of the Goods and Related Services specified in the Tender; OR
(b)	limits in any substantial way, inconsistent with the Bidding Documents, the Purchaser's rights or the Bidder's obligations under the Proposed Contract; OR
(c)	if rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.

- 1.26.2. The Purchasers' determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

- 1.26.3. If a bid is not substantially responsive, it will be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation or omission.

1.27 **Non-Conformity, Error and Omission**

- 1.27.1. Provided that a Bid is substantially responsive, the Purchaser may waive any non-conformities or omissions in the Bid that do not constitute a material deviation.

- 1.27.2. Provided that a bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify non-material non-conformities or omissions in the bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

- 1.27.3. Provided that the Bid is substantially responsive, the Purchaser shall correct arithmetical errors on the following basis:

(a)	if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement
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	of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;
(b)	if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
(c)	if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

1.27.4. Provided that a bid is substantially responsive, the purchaser may request that a bidder may confirm the correctness of arithmetic errors as done by the purchaser within a target date. In case, no reply is received then the bid submitted shall be ignored and its Bid Security may be forfeited.

1.28 Examination of Terms & Conditions, Technical Evaluation

1.28.1. The Purchaser shall examine the Bid to confirm that all terms and conditions specified in the GCC and the SCC have been accepted by the Bidder without any material deviation or reservation.

1.28.2. The Purchaser shall evaluate the technical aspects of the Bid submitted in accordance with **ITB Clause 1.14**, to confirm that all requirements specified in Chapter 4 of the Bidding Documents have been met without any material deviation or reservation.

1.28.3. If, after the examination of the terms and conditions and the technical evaluation, the Purchaser determines that the Bid is not substantially responsive in accordance with **ITB Clause 1.26**, it shall reject the Bid.

1.29 Conversion to Single Currency

To facilitate evaluation and comparison, the Purchaser will convert all bid prices expressed in the amounts in various currencies in which the bid prices are payable to Indian Rupees at the selling exchange rate established by any bank in India as notified in the Newspapers on the date of bid opening in the case of single bid and the rates prevalent on the date of opening of the Price Bids in case of two-bid. For this purpose, exchange rate notified in www.xe.com or www.rbi.org or any other website would be used by the purchaser.

1.30 Evaluation and comparison of bids

1.30.1. The Purchaser shall evaluate each bid that has been determined, up to this stage of the evaluation, to be substantially responsive.

1.30.2. To evaluate a Bid, the Purchaser shall only use all the factors, methodologies and criteria defined below. No other criteria or methodology will be used.

1.30.3. The bids shall be evaluated on the basis of final landing cost which shall be arrived as under:

(a) For Goods manufactured within India

i)	The price of the goods quoted Ex-works
ii)	GST which will be payable on the goods if the contract is awarded.
iii)	The charges for inland transportation, insurance and other local services required for delivering the goods at the desired destination as specified in the price schedule form.
iv)	The installation, commissioning and training charges including any incidental services, if any as given in Scope of Supply (Chapter 4)

(b) For Goods manufactured abroad

i)	The price of the goods, quoted on FCA (named Airport abroad) or FOB (named port of shipment), as specified in the price schedule form.
ii)	The charges for insurance and transportation of the goods to the port / place of destination i.e. CIP/CIF Price.
iii)	The agency commission charges payable to Indian agent in Indian rupees, if any.
iv)	The installation, commissioning and training charges including any incidental services, if any

- 1.30.4. The comparison between the indigenous and the foreign offers shall be made on FOR destination basis and CIF / CIP basis respectively. However, the CIF / CIP prices quoted by any foreign bidder shall be loaded further as under: -

a)	Towards customs duty and other statutory levies – as per applicable rates.
b)	Towards custom clearance, inland transportation etc.- 2% of the CIF / CIP value.

- 1.30.5. In case of Purchase of many items against one tender, which are not inter- dependent or, where compatibility is not a problem, normally the comparison would be made on ex-works, (in case of indigenous items) and on FOB / FCA (in the case of imports) prices quoted by the firms for identifying the lowest quoting firm for each item.
- 1.30.6. Orders for Imported Goods need not necessarily be on FOB / FCA basis rather it can be on the basis of any of the Incoterms latest edition as may be amended from time to time by the ICC or any other designated authority and favourable to CSIR -NAL.
- 1.30.7. Wherever the price quoted on FOB / FCA and CIF / CIP basis are the same, the Contract would be made on CIF / CIP basis only.
- 1.30.8. The GCC and the SCC shall specify the mode of transport i.e. whether by air / ocean / road / rail.

1.31 Comparison of Bids

- 1.31.1 The Purchaser shall compare all substantially responsive bids to determine the lowest valued bid, in accordance with **ITB Clause 1.30**.

1.32 Contacting the Purchaser

- 1.32.1. Subject to **ITB Clause 1.24**, no Bidder shall contact the Purchaser on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded.
- 1.32.2. Any effort by a Bidder to influence the Purchaser in its decisions on bid evaluation, bid comparison or contract award may result in rejection of the Bidder's bid.

1.33 Post qualification

- 1.33.1. In the absence of pre-qualification, the Purchaser will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated responsive bid is qualified to perform the contract satisfactorily, in accordance with the criteria listed in **ITB Clause 1.13**.
- 1.33.2. The determination will take into account the Eligibility & Qualification criteria listed in the bidding documents and will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, as well as such other information as the Purchaser deems necessary and appropriate.
- 1.33.3. An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's bid.

F. Award of contract

1.34 Negotiations

- 1.34.1 Negotiation with Bidders after opening of bids is severely discouraged. Therefore, the Bidders are advised in their own interest to quote their best competitive/discounted offer in the first instance or maximum discount may be indicated in the quote/offer. However, the Director, CSIR-NAL reserves the right for commercial discussion with the lowest responsive bidder only, if considered appropriate. Counter offers tantamount to negotiations and shall be treated at par with negotiations in the case of one time services.

1.35 Award Criteria

- 1.35.1 Subject to **ITB Clause 1.37**, the Purchaser will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined to be the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily. The details of the award would be hosted on the website of the Purchaser.

1.36 Purchaser's right to vary Quantities at Time of Award or later

- 1.36.1 The Purchaser reserves the right at the time of Contract award to increase or decrease the quantity of goods and services originally specified in the Chapter 4 without any change in unit price or other terms and conditions. Further, at the discretion of the purchaser, the quantities in the contract may be enhanced by 30% within the delivery period.

1.37 Purchaser's right to accept any Bid and to reject any or all Bids

- 1.37.1 The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders.

1.38 Notification of Award

- 1.38.1. Prior to the expiration of the period of bid validity, the Purchaser will notify the successful bidder in writing by registered letter or by cable or telex or fax or e mail that the bid has been accepted and a separate purchase order shall follow through post.
- 1.38.2. Until a formal contract is prepared and executed, the notification of award should constitute a binding contract.
- 1.38.3. Upon the successful Bidder's furnishing of the signed Contract Form and Performance Security pursuant to **ITB Clause 1.41**, the Purchaser will promptly notify each unsuccessful Bidder and discharge its bid security.

1.39 Signing of Contract

- 1.39.1. Promptly after notification, the Purchaser shall send the successful Bidder the Purchase Order.
- 1.39.2. Within twenty-one (21) days of date of the Purchase Order, the successful Bidder shall enter into Contract Agreement as per Chapter 7.

1.40 Order Acceptance

- 1.40.1. The successful bidder should submit Order acceptance within 15 days from the date of issue of Purchase Order, failing which it shall be presumed that the Bidder is not interested and his bid security is liable to be forfeited pursuant to **ITB Clause 1.15.11**.
- 1.40.2. The order acceptance must be received within 15 days. However, the Purchaser has the powers to extend the time frame for submission of order acceptance and submission of Performance Security (PS). Even after extension of time, if the order acceptance / PS are not received, the contract shall be cancelled and limited tenders irrespective of the value shall be invited from the responding firms after forfeiting the bid security of the defaulting firm, where applicable, provided there is no change in specifications. In such cases the defaulting firm shall not be considered again for re-tendering in the particular case.

1.41 Performance Security

- 1.41.1 Within 21 days of receipt of the notification of award / Purchase Order as per the GCC Clause 2.12, the Bidder shall furnish Performance Security for the amount specified in SCC, valid for the time 60 days after the warranty period.

CHAPTER 2
CONDITIONS OF CONTRACT

A. GENERAL CONDITIONS OF CONTRACT

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Note: The General Conditions of Contract shall form the part of Purchase Order / Contract.

A. GENERAL CONDITIONS OF CONTRACT

2.1. Definitions

The following words and expressions shall have the meanings hereby assigned to them:

Sr. No.	Words / Expressions	Meaning
(a)	Contract	The Contract Agreement entered into between the Purchaser and the Bidder, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
(b)	Contract Documents	The documents listed in the Contract Agreement, including any amendments thereto.
(c)	Contract Price	The price payable to the Bidder as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions there from, as may be made pursuant to the Contract.
(d)	Day	Calendar day
(e)	Completion	The fulfilment of the Related Services by the Bidder in accordance with the terms and conditions set forth in the Contract.
(f)	GCC	The General Conditions of Contract.
(g)	Goods	All of the commodities, raw material, machinery and equipment, and/or other materials that the Bidder is required to supply to the Purchaser under the Contract
(h)	Services	The services incidental to the supply of the goods, such as transportation, insurance, installation, training and initial maintenance and other such obligations of the Bidder under the Contract.
(i)	SCC	The Special Conditions of Contract.
(j)	Subcontractor	Any natural person, private or government entity, or a combination of the above, to which any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Bidder.
(k)	Bidder	The natural Person, Private or Government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.
(l)	Council	The Council of Scientific & Industrial Research (CSIR), registered under the Societies Registration Act, 1860 of the Government of India having its registered office at 2, Rafi Marg, New Delhi-110001, India.
(m)	Purchaser	Any of the constituent Laboratory/Institute of the Council situated at any designated place in India as specified in SCC
(n)	The final destination	The place named in the SCC.

2.2 Contract Documents

2.2.1 Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.

2.2.2 Successful bidder shall have to enter into Contract Agreement on Rs.500/- non judicial stamp paper as per Contract Form given in Chapter 7 within 21 days of placement of Purchase Order having value above Rs.25 Lacs or equivalent amount in Foreign Currency.

2.3 Fraud and Corruption

The purchaser requires that bidders, Bidders, contractors and consultants, if any, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy,

(a) The terms set forth below are defined as follows:

I	Corrupt practice	The offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution
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II	Fraudulent practice	A misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract
III	Collusive practice	A scheme or arrangement between two or more bidders, with or without the knowledge of the Borrower, designed to establish bid prices at artificial, non-competitive levels
IV	Coercive practice	Harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract

(b) The purchaser will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question.

2.4 Joint Venture, Consortium or Association/Amalgamation/Acquisition, Patent Indemnity etc.

If the Bidder is a joint venture, consortium, or association, all of the parties shall be jointly and severally liable to the Purchaser for the fulfilment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the Purchaser.

2.4.1. Amalgamation/Acquisition etc.:

In the event the Manufacturer/Bidder proposes for amalgamation, acquisition or sale its business to any firm during the contract period, the Buyer/Successor of the Principal Company are liable for execution of the contract and also fulfilment of contractual obligations i.e. supply, installation, commissioning, warranty, maintenance/replacement of spares accessories etc. You may confirm this condition while submitting the bid.

2.4.2 Indemnity Bond

In order to safeguard the interest of CSIR-NAL, the Bidder should submit Indemnity Bond as given in Chapter-8 (Annexure-J) on Rs.500/- non judicial stamp paper within 21 days of placing of the order for Purchase Order having value above Rs.25 lakh or equivalent amount in Foreign Currency.

2.4.3 Patent Indemnity

a) The Bidder shall, subject to the Purchaser's compliance with GCC Sub-Clause 2.4.3(a), indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:

(I)	the installation of the Goods by the Bidder or the use of the Goods in India
AND	
(II)	the sale in any country of the products produced by the Goods

b) If any proceedings are brought or any claim is made against the Purchaser, the Purchaser shall promptly give the Bidder a notice thereof and the Bidder may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claims.

2.5 Scope of Supply

2.5.1 Scope of Supply (i.e. the Goods to be supplied and Related Services to be performed) shall be as specified in the Chapter-4: clause 4.2

2.6 Bidders' Responsibilities

2.6.1 The Bidder shall supply all the Goods and perform all Related Services included in the Scope of Supply- Clause 2.5 of the GCC and the Delivery & Completion Schedule, as per GCC Clause 2.15 relating to delivery and document.

2.7 Contract price

- 2.7.1 Prices charged by the Bidder for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Bidder in its bid.

2.8 Copy Right

- 2.8.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Bidder herein shall remain vested in the Bidder, or, if they are furnished to the Purchaser directly or through the Bidder by any third party, including Bidders of materials, the copyright in such materials shall remain vested in such third party

2.9 Application

- 2.9.1 These General Conditions shall apply to the extent that they are not superseded by provisions in other parts of the Contract.

2.10 Standards

The Goods supplied and services rendered under this Contract shall conform to the standards mentioned in the Technical Specifications and Schedule of Requirements, and, when no applicable standard is mentioned, to the authoritative standard appropriate to the Goods' country of origin and such standards shall be the latest issued by the concerned institution.

2.11 Use of Contract Documents and Information

- 2.11.1 The Bidder shall not, without the Purchaser's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Purchaser in connection therewith, to any person other than a person employed by the Bidder in performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far, as may be necessary for purposes of such performance.
- 2.11.2 The Bidder shall not, without the Purchaser's prior written consent, make use of any document or information enumerated above except for purposes of performing the Contract.
- 2.11.3 Any document, other than the Contract itself, enumerated above shall remain the property of the Purchaser and shall be returned (in all copies) to the Purchaser on completion of the Bidder's performance under the Contract if so required by the Purchaser.

2.12 Performance Security (PS)

- 2.12.1 The amount of the **Performance Security** shall be as specified in SCC, valid up to the period of the contract plus 60 days
- 2.12.2 Within 21 days of receipt of the notification of award of contract / Purchase Order, the Bidder shall furnish performance security in the amount specified in SCC, valid till 60 days after the warranty period. Alternatively, the PS may also be submitted at the time of release of final payment in cases where part payment is made against delivery & part on installation. The PS, where applicable, shall be submitted in advance for orders where full payment is to be made on Letter of Credit (LC) or on delivery. In this case, submission of PS at the time of negotiation of documents through Bank would be stipulated as a condition in the LC and the BS should be kept valid till such time the PS is submitted.
- 2.12.3 The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the Bidder's failure to complete its obligations under the Contract.
- 2.12.4 The Performance Security shall be denominated in Indian Rupees for the offers received for supplies within India and denominated in the currency of the contract in the case of offers received for supply from foreign countries.
- 2.12.5 In the case of imports, the PS may be submitted either by the principal or by the Indian agent and, in the case of purchases from indigenous sources, the PS may be submitted by either the manufacturer or their authorized dealer / bidder.
- 2.12.5 The Performance security shall be in one of the following forms:

(a)	A Bank guarantee or stand-by Letter of Credit issued by a Nationalized / Scheduled bank located in India or a bank located abroad in the form provided in the bidding documents. OR
(b)	A Banker's cheque or Account Payee demand draft in favour of the purchaser.

- 2.12.6 The performance security will be discharged by the Purchaser and returned to the Bidder not later than 60 days following the date of completion of the Bidder's performance obligations, including any warranty obligations, unless specified otherwise in SCC, without levy of any interest.
- 2.12.7 In the event of any contract amendment, the Bidder shall, within 21 days of receipt of such amendment, furnish the amendment to the performance security, rendering the same valid for the duration of the contract, as amended for further period of 60 days thereafter.
- 2.12.8 The order confirmation should be received within 15 days from the date of notification of award. However, the Purchaser has the powers to extend the time frame for submission of order confirmation and submission of Performance Security (PS). Even after extension of time, if the order acceptance and PS are not received, the contract shall be cancelled and limited tenders irrespective of the value would be invited from the responding firms after forfeiting the bid security of the defaulting firm, where applicable provided there is no change in specifications. In such cases the defaulting firm would not be considered again for re-tendering in the particular case.
- 2.12.9 Whenever, the bidder chooses to submit the Performance Security in the form of Bank Guarantee, and then he should advise the banker issuing the Bank Guarantee to immediately send by Registered Post (A.D.) an unstamped duplicate copy of the Guarantee directly to the Purchaser with a covering letter to compare with the original BG for the correctness, genuineness, etc.

2.13 Installation, Commissioning, Demonstration, Inspections and Tests

- 2.13.1 Bidder shall be responsible for Installation, Commissioning, Demonstration, Inspections and Tests wherever applicable and for after sales service during the warranty and thereafter as specified in Chapter 4.

2.14 Packing

- 2.14.1. The Bidder shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.
- 2.14.2. The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Contract including additional requirements, if any, specified in SCC and in any subsequent instructions ordered by the Purchaser.

2.15 Delivery and Documents

- 2.15.1. Delivery of the Goods and completion and related services shall be made by the Bidder in accordance with the terms specified by the Purchaser in the contract. The details of shipping and/or other documents to be furnished by the Bidder are as given below or /and as specified in SCC.

Details of Shipping and other Documents to be furnished by the Bidder are :	
A)	For goods manufactured or supplied from within India
	Within 24 hours of dispatch, the Bidder shall notify the purchaser the complete details of dispatch and also supply following documents by registered post / speed post and copies thereof by FAX/email
(a)	Three copies of Bidder's Invoice indicating, inter-alia description and specification of the goods, quantity, unit price, total value
(b)	Packing list
(c)	Certificate of country of origin
(d)	Insurance certificate, if required under the contract
(e)	Railway receipt/Consignment note
(f)	Manufacturer's warrantee certificate and in-house inspection certificate, if any

(g)	Inspection certificate issued by purchaser's inspector, if any
(h)	Any other document(s) as and when required in terms of the contract
NOTE:	
1	The nomenclature used for the item description in the invoice(s), packing list(s) and the delivery note(s) etc. should be identical to that used in the contract. The dispatch particulars including the name of the transporter should also be mentioned in the Invoice(s).
2	The above documents should be received by the Purchaser before arrival of the Goods and, if not received, the Bidder will be responsible for any consequent expenses.
B) For goods manufactured or supplied from abroad	
	Within 24 hours of dispatch, the Bidder shall notify the purchaser the complete details of dispatch and also supply following documents by Registered Post / courier and copies thereof by FAX/Email.
(a)	Three copies of Bidder's Invoice giving full details of the goods including quantity, value, etc.
(b)	Packing list
(c)	Certificate of country of origin
(d)	Manufacturer's warrantee and Inspection certificate, if any
(e)	Inspection certificate issued by the Purchaser's Inspector, if any
(f)	Insurance Certificate, if required under the contract
(g)	Name of the Vessel / Carrier
(h)	Bill of Lading / Airway Bill
(i)	Port of Loading
(j)	Date of Shipment
(k)	Port of Discharge & expected date of arrival of goods
(l)	Any other document(s) as and when required in terms of the contract
NOTE:	
1	The nomenclature used for the item description in the invoice(s), packing list(s) and the delivery note(s) etc. should be identical to that used in the contract. The dispatch particulars including the name of the transporter should also be mentioned in the Invoice(s).
2	The above documents should be received by the Purchaser before arrival of the Goods and, if not received, the Bidder will be responsible for any consequent expenses.
3	The clearing of the consignment at Bengaluru Airport shall be done by our authorized Custom House Agents (CHA). The corresponding shipping documents may be forwarded to them accordingly. It is advised to give us and our CHA, a pre-alert before the consignment is dispatched. If there is delay in clearing of the consignment for <u>not</u> giving timely pre-alert then demurrage (Ware house charges), if applicable has to be refunded to us.

2.15.2. The terms FOB, FCA, CIF, CIP etc. shall be governed by the rules prescribed in the current edition of the Incoterms published by the International Chambers of Commerce (ICC), Paris.

2.15.3. The mode of transportation shall be as specified in SCC.

2.15.4. The Bidders may please note that the delivery of the system should be strictly within delivery schedule mentioned in the Chapter-4 / Purchase Order.

2.15.5. Goods should not be dispatched until the Bidder receives a firm Purchase Order.

2.16 Insurance

2.16.1. Indigenous goods, the Goods supplied under the Contract shall be fully insured in Indian Rupees against any loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in SCC.

2.16.2. Where delivery of the goods is required by the purchaser on CIF / CIP basis for imported goods or FOR destination for Indigenous goods, the Bidder shall arrange and pay for Marine / Transit Insurance on warehouse-to-warehouse basis, naming the purchaser as beneficiary and initiate & pursue claims till settlement, in the event of any loss or damage.

2.16.3. Where delivery is on FOB or FCA basis for imported goods or FOR dispatch station for indigenous goods, then insurance would be the responsibility of the purchaser.

2.16.4. The equipment's to be supplied will be insured by the Bidder against all risks of loss or damage from the date of shipment till such time it is delivered at CSIR-NAL site in case of Rupee transaction

2.16.5. With a view to ensure that claims on insurance companies, if any, are lodged in time, the Bidders and / or the Indian agent shall be responsible for follow up with their principals for ascertaining the dispatch details and informing the same to the Purchaser and he shall also liaise with the Purchaser to ascertain the arrival of the consignment after clearance so that immediately thereafter in his presence the consignment could be opened and the insurance claim be lodged, if required, without any loss of time. Any delay on the part of the Bidder / Indian Agent would be viewed seriously and he shall be directly responsible for any loss sustained by the Purchaser on the event of the delay.

2.17 Transportation

2.17.1. Where the Bidder is required under the Contract to deliver the Goods on FOB basis, transport of the Goods, up to and including the point of putting the Goods on board the vessel at the specified port of loading, shall be arranged and paid for by the Bidder, and the cost thereof shall be included in the Contract price. Where the Bidder is required under the Contract to deliver the Goods on FCA basis, transport of the Goods and delivery into the custody of the carrier at the place named by the Purchaser or other agreed point shall be arranged and paid for by the Bidder, and the cost thereof shall be included in the Contract price.

2.17.2. Where the Bidder is required under the Contract to deliver the Goods CIF or CIP, transport of the Goods to the port of destination or such other named place of destination in the Purchaser’s country, as shall be specified in the Contract, shall be arranged and paid for by the Bidder, and the cost thereof shall be included in the Contract Price.

2.17.3. In the case of supplies from within India, where the Bidder is required under the Contract to transport the Goods to a specified destination in India, defined as the Final Destination, transport to such destination, including insurance and storage, as specified in the Contract, shall be arranged by the Bidder, and the related costs shall be included in the Contract Price.

2.17.4. The clearing of the consignment at Bengaluru Airport shall be done by our authorized Custom House Agents (CHA) for CIP / CIF consignments. The details of CHA will be given in the Purchase Order. The corresponding shipping documents may be forwarded to them accordingly. It is advised to give us and our CHA, a pre-alert before the consignment is dispatched. If there is delay in clearing of the consignment for not giving timely pre-alert then demurrage (Ware house charges), if applicable has to be refunded to us by the Bidder / Indian Agent or the same will be deducted from any payment due to Bidder / Indian Agent against this order or any other Purchase order.

2.18 Incidental Services

The Bidder may be required to provide any or all of the services, including training, if any, as specified in **Chapter 4**.

2.19 Spare Parts

The Bidder shall be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Bidder:

(a)	Such spare parts as the Purchaser may elect to purchase from the Bidder, providing that this election shall not relieve the Bidder of any warranty obligations under the Contract; and
(b)	In the event of termination of production of the spare parts:
	(i) Advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements; and
	(ii) Following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if requested.

2.20 Warranty

- a) The Bidder warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.
- b) The Bidder further warrants that the Goods shall be free from defects arising from any act or omission of the Bidder or arising from design, materials, and workmanship, under normal use in the conditions prevailing in India.

- c) **Unless otherwise specified in the SCC**, the warranty shall remain valid for Twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the SCC, or for Eighteen (18) months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.
- d) The warranty on the associated software should cover providing of upgraded version/s, if any, released during the warranty period free of cost.
- e) The bidder shall assure the supply of spare parts after warranty is over for maintenance of the equipment supplied if and when required for a period of 10 years from the date of supply of equipment on payment on approved price list basis.
- f) The equipment must be supported by a Service Centre manned by the principal Bidder's technical support engineers. The support through this Centre must be available 24 hours in a day, seven days a week and 365 days a year. Also it should be possible to contact the Principal's Bidder support Centre on a toll free number/web/mail.
- g) An undertaking from the manufacturer is required in this regard stating that they would facilitate the Bidder, Service provider on regular basis with technology / product updates & extend support for the warranty as well.
- h) Bidder will have to arrange for all the testing equipment & tools required for installation, testing & maintenance etc.
- i) The Principal Bidder must have a local logistics support by maintaining a local spares depot in the country of deployment of the equipment. This is to ensure immediate delivery of spares parts from Principal Bidder of equipment to its channel partner/system integrator.
- j) Details of onsite warranty, Name of Agency that shall maintain during warranty and undertake Annual Maintenance Contract/Comprehensive Service Maintenance Contract beyond warranty shall be given in the offer. In case of foreign quote, the name of Indian Agent who shall maintain during warranty and AMC beyond warranty shall be given in the Technical Offer.
- k) The Purchaser shall give notice to the Bidder stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Bidder to inspect such defects.
- l) Upon receipt of such notice, the Bidder shall, within a reasonable period of time, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.
- m) If having been notified, the Bidder fails to remedy the defect within a reasonable period of time; the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Bidder's risk and expense and without prejudice to any other rights which the Purchaser may have against the Bidder under the Contract.
- n) In case the Equipment / System remains non-operational or performs below the desired level for more than 1 week after intimation of the fault in the Equipment / System then Warranty period shall be extended for further period for which Equipment / System remained non-operational or performed below the desired level, without prejudice to any other terms and conditions of the Contract.
- o) The defects, if any, during the warranty period are to be rectified free of charge by arranging free replacement wherever necessary.
- p) In case of any replacement during the warranty period the same shall be made free of cost i.e. DDP for import replacement and/or free delivery to NCL for indigenous replacement. All the duties / taxes relating to these replacements have to be borne by the Bidder. Dispatch details of such warranty replacements have to be informed in advance to enable us to provide documents for custom clearance.

q) Any replacements during warranty period should be free of cost. If the defective item has to be sent back to the Principal Bidder, for such replacements / returns to the Principal Bidder / Indian Agent has to bear documentation charges. If the cost of replacement is upto Rs.5 Lakh then the documentation charges will be Rs.5,000/- and above Rs.5 Lakh it is Rs.10,000/-. Such charges have to be paid in favour of The Director, CSIR-NAL, Bengaluru. These charges are only for documentation. Any charges regarding packing, forwarding, freight, insurance, etc. should be borne by the Principal Bidder / Indian Agent for returning of defective items. In other words, any warranty replacement has to be done immediately/within a week (7 days) without expecting CSIR-NAL to export the defective items to Principal Bidder for repair/replacements. All charges involved for re-export of defective items have to be borne by Principal Bidder / Indian Agent.

2.21 Terms of Payment

- 2.21.1. The method and conditions of payment to be made to the Bidder under this Contract shall be as specified in the SCC.
- 2.21.2. The Bidder's request(s) for payment shall be made to the Purchaser in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and the Services performed, and by documents, submitted pursuant to Delivery and document Clause of the GCC and upon fulfilment of other obligations stipulated in the contract.
- 2.21.3. Payments shall be made promptly by the Purchaser but in no case later than thirty (30) days after submission of the Invoice or claim by the Bidder.
- 2.21.4. Payment shall be made in currency as indicated in the contract.

2.22 Change Orders and Contract Amendments

2.22.1. The Purchaser may at any time, by written order given to the Bidder pursuant to Clause on Notices of the GCC make changes within the general scope of the Contract in any one or more of the following:

a)	Drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
b)	The method of shipping or packing;
c)	The place of delivery; and/or
d)	The Services to be provided by the Bidder.
e)	The delivery schedule.

- 2.22.2. If any such change causes an increase or decrease in the cost of, or the time required for, the Bidder's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Bidder for adjustment under this clause must be ascertained within fifteen (15) days from the date of the Bidder's receipt of the Purchaser's change order.
- 2.22.3. No variation or modification in the terms of the contract shall be made except by written amendment signed by the parties.

2.23 Assignment

2.23.1. The Bidder shall not assign, in whole or in part, its obligations to perform under the Contract, except with the Purchaser's prior written consent.

2.24 Subcontracts

2.24.1. The Bidder shall notify the Purchaser in writing of all subcontracts awarded under this Contract if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the Bidder from any liability or duties or obligation under the Contract.

2.25 Extension of time

2.25.1. Delivery of the Goods and performance of the Services shall be made by the Bidder in accordance with the Delivery schedule specified by the Purchaser.

- 2.25.2. If at any time during performance of the Contract, the Bidder or its sub-contractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Bidder shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Bidder's notice, the Purchaser shall evaluate the situation and may, at its discretion, extend the Bidder's time for performance with or without penalty, in which case the extension shall be ratified by the parties by amendment to the Contract.
- 2.25.3. Except as provided under the Force Majeure clause of the GCC, a delay by the Bidder in the performance of its delivery obligations shall render the Bidder liable to the imposition of penalty pursuant to Penalty Clause of the GCC unless an extension of time is agreed upon pursuant to above clause without the application of penalty clause.

2.26 Penalty clause

- 2.26.1 Subject to GCC Clause on Force Majeure, if the Bidder fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as penalty, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services or contract value for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the Percentage specified in SCC. Once the maximum is reached, the Purchaser may consider termination of the Contract pursuant to GCC Clause on Termination for Default. The SCC shall also indicate the basis for ascertaining the value on which the penalty shall be applicable.

2.27 Termination for Default

- 2.27.1. The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Bidder, terminate the Contract in whole or part:

(a)	If the Bidder fails to deliver any or all of the Goods within the period(s) specified in the contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause on Extension of Time;
(b)	If the Bidder fails to perform any other obligation(s) under the Contract
(c)	If the Bidder, in the judgment of the Purchaser has engaged in corrupt or fraudulent or collusive or coercive practices as defined in GCC Clause on Fraud or Corruption in competing for or in executing the Contract.

- 2.27.2. In the event the purchaser terminates the contract in whole or in part, he may take recourse to any one or more of the following action:

(a)	The Performance Security/EMD will be forfeited;
(b)	The Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods similar to those undelivered, and the Bidder shall be liable for all available actions against it in terms of the contract.
(c)	However, the Bidder shall continue to perform the contract to the extent not terminated.

2.28 Force Majeure

- 2.28.1. Notwithstanding the provisions of GCC Clauses relating to Extension of Time, Penalty and Termination for Default the Bidder shall not be liable for forfeiture of its Performance Security, Liquidated Damages or Termination for Default, if and to the extent that, its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 2.28.2. For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Bidder that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Bidder. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- 2.28.3. If a Force Majeure situation arises, the Bidder shall promptly notify the Purchaser in writing of such conditions and the cause thereof within 21 days of its occurrence. Unless otherwise directed by the Purchaser in writing, the Bidder shall continue to perform its obligations under the Contract as far as is

reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

- 2.28.4. If the performance in whole or in part or any obligations under the contract is prevented or delayed by any reason of Force Majeure for a period exceeding 60 days, either party may at its option terminate the contract without any financial repercussions on either side.

2.29 Termination for Insolvency

- 2.29.1 The Purchaser may at any time terminate the Contract by giving written notice to the Bidder, if the Bidder becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Bidder, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to the Purchaser.

2.30 Termination for Convenience

- 2.30.1. The Purchaser, by written notice sent to the Bidder, may terminate the Contract, in whole or in part, at any time. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Bidder under the Contract is terminated, and the date upon which such termination becomes effective.

- 2.30.2. The Goods that are complete and ready for shipment within 30 days after the Bidder's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:

(a)	To have any portion completed and delivered at the Contract terms and prices; and / or
(b)	To cancel the remainder and pay to the Bidder an agreed amount for partially completed Goods / Services and for materials and parts previously procured by the Bidder.

2.31 Settlement of Disputes

- 2.31.1. The Purchaser and the Bidder shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

- 2.31.2. If, after twenty-one (21) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Bidder may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract.

- 2.31.3. The dispute settlement mechanism / arbitration proceedings shall be concluded as under:

(a)	In case of Dispute or difference arising between the Purchaser and a domestic Bidder relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Indian Arbitration & Conciliation Act, 1996, the rules there under and any statutory modifications or re-enactments thereof shall apply to the arbitration proceedings. The dispute shall be referred to the Director General, Council of Scientific & Industrial Research and if he is unable or unwilling to act, to the sole arbitration of some other person appointed by him willing to act as such Arbitrator. The award of the arbitrator so appointed shall be final, conclusive and binding on all parties to the Contract.
(b)	In the case of a dispute between the purchaser and a Foreign Bidder, the dispute shall be settled by arbitration in accordance with provision of sub-clause (a) above. But if this is not acceptable to the Bidder then the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules.

- 2.31.4. The venue of the arbitration shall be the place from where the Purchase Order or Contract is issued.

- 2.31.5. Notwithstanding any reference to arbitration herein,

(a)	the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree;	and
(b)	the Purchaser shall pay the Bidder any monies due the Bidder.	

2.32 Governing Language

2.32.1 The Contract shall be written in English language which shall govern its interpretation. All correspondence and other documents pertaining to the Contract, which are exchanged by the parties, shall be written in the English language only.

2.33 Applicable Law / Jurisdiction

2.33.1 The Contract shall be interpreted in accordance with the laws of the Union of India and all disputes shall be subject to place of jurisdiction as specified in SCC.

2.34 Notices

2.34.1. Any notice given by one party to the other pursuant to this contract / order shall be sent to the other party in writing or by cable, telex, FAX, e-mail or / and confirmed in writing to the other party's address specified in the SCC.

2.34.2. A notice shall be effective when delivered or on the notice's effective date, whichever is later.

2.35 Taxes and Duties

2.35.1. For goods manufactured outside India, the Bidder shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside India.

2.35.2. For goods Manufactured within India, the Bidder shall be entirely responsible for all taxes, duties, license fees, etc., incurred till its final manufacture / production.

2.35.3. If any tax exemptions, reductions, allowances or privileges may be available to the Bidder in India, the Purchaser shall make its best efforts to enable the Bidder to benefit from any such tax savings to the maximum allowable extent.

2.35.4. All payments due under the contract shall be paid after deduction of statutory levies (at source) (like ESIC, IT, etc.) wherever applicable.

2.36 Right to use Defective Goods

2.36.1 If after delivery, installation and within commissioning & acceptance and within warranty period, the operation or use of the goods proves to be unsatisfactory, the Purchaser shall have the right to continue to operate or use such goods until rectifications of defects, errors or omissions by repair or by partial or complete replacement is made without interfering with the Purchaser's operation.

2.37 Protection against Damage

The system shall not be prone to damage during power failures and trip outs. The normal voltage and frequency conditions available at site as under:

(a)	Voltage 230 volts – Single phase or 415 Volt for 3 phase (±10%)
(b)	Frequency 50 Hz.

2.38 Site preparation and installation

The Purchaser is solely responsible for the construction of the equipment sites unless otherwise specified in Chapter 4 in compliance with the technical and environmental specifications defined by the Bidder. The Purchaser will designate the installation sites before the scheduled installation date to allow the Bidder to perform a site inspection to verify the appropriateness of the sites before the installation of the Equipment, if required. The Bidder shall inform the purchaser about the site preparation, if any, needed for installation, of the goods at the purchaser's site immediately after notification of award / contract.

2.39 Annual Maintenance Contract

- 2.39.1. The bidders should also quote for Annual Maintenance Contract after warranty for subsequent years. CSIR-NAL at its discretion may award / utilise these quotes for AMCs.
- 2.39.2. No sub-contracting will be allowed for installation or maintaining system/ equipment / instrument during or after warranty period in case AMC is awarded
- 2.39.3. Mention the charges for comprehensive maintenance contract separately in Commercial bid (for post warranty period).

2.40 Integrity Pact

- 2.40.1. As per directive of the CVC all organizations including CSIR laboratories / institutes have to adopt an Integrity pact (IP) to ensure transparency, equity and competitiveness in major Public procurement having procurement value above Rs.3 Crore. The integrity pact envisages an agreement between the prospective bidders / Bidders with the buyer committing the persons / officials of both the parties with the aim not to exercise any corrupt influence on any aspect of the contract. Only those bidders / Bidders, who are willing to enter in to such an integrity pact with the Purchaser, would be competent to participate in the bidding.
- 2.40.2. IP also envisages Panel of Independent External Monitors (IEMs) which shall be provided / recommended by CSIR / its labs and institutes with the approval of by CVC.
- 2.40.3. The integrity Pact would be effective from the date of invitation of bids till complete execution of the contract.
- 2.40.4. **The SCC shall specify whether there is a need to enter into a separate integrity pact or not.** If the Integrity Pact is required for the Tender, then the format of Integrity Pact is as given in **Chapter – 8**.

CHAPTER 2

B. SPECIAL CONDITIONS OF CONTRACT (SCC)

The following Special Conditions of Contract (SCC) shall supplement and / or amend the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

GCC Clause	Special Condition of Contract (SCC)												
GCC 2.1.1(l)	<p>The Purchaser is: The Director CSIR- National Aerospace Laboratories HAL Airport Road, Kodihalli, Bengaluru – 560017 Karnataka-India</p>												
GCC 2.1.1(m)	<p>The Final Destination is: CSIR- National Aerospace Laboratories HAL Airport Road, Kodihalli, Bengaluru – 560017 Karnataka-India</p>												
GCC 2.15.3	<p>Delivery – Mode of Shipment:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;">(a)</td> <td>In case of supplies from within India, the mode of transportation shall be by Road.</td> </tr> <tr> <td style="text-align: center;">(b)</td> <td>In case of supplies from abroad, the mode of transportation shall be by AIR</td> </tr> </table>	(a)	In case of supplies from within India, the mode of transportation shall be by Road .	(b)	In case of supplies from abroad, the mode of transportation shall be by AIR								
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(b)	In case of supplies from abroad, the mode of transportation shall be by AIR												
GCC 2.13.1	<p>Performance Security/Performance Bank Guarantee</p> <p>The amount of the Performance Bank Guarantee shall be 10% of the contract value to be submitted within 21 days from the date of PO valid up to 60 days after the date of completion of performance obligations including warranty obligations.</p>												
GCC 2.16.1	<p>Insurance</p> <p>From Abroad The Insurance shall be for an amount equal to 110% of the CIF or CIP value of the contract from within “warehouse to warehouse (final destination)” on “all risk basis” including strikes, riots and civil commotion, in addition to storage policy for 60 days is advised so as to ensure the inspection by the Indian Agent at the time of opening the packages.</p> <p>Within India The Insurance shall be for an amount equal to 110% of the invoice value of the contract from “warehouse to warehouse (final destination)” on “all risk basis” including strikes, riots and civil commotion, in addition to storage policy for 60 days is advised so as to ensure the inspection at the time of opening the packages.</p>												
GCC 2.20.3	<p>Warranty:</p> <p>The period of validity of the Warranty shall be:</p> <p>The warranty shall remain valid for One Years (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted by CSIR-NAL at the final destination.</p>												
GCC 2.21.1	<p>Payment Details:</p> <p>The method and conditions of payment to be made to the Bidder under this Contract shall be as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;">A</td> <td>Payment for Goods supplied from abroad:</td> </tr> <tr> <td colspan="2">Payment of foreign currency portion shall be made in currency of the Contract in the following manner:</td> </tr> <tr> <td style="text-align: center;">(a)</td> <td>On Shipment: Eighty (80%) percent of the Contract Price of the Goods shipped shall be paid through irrevocable letter of credit opened in favour of the Bidder in a bank in its country, upon submission of documents specified in GCC Clause 2.15.</td> </tr> <tr> <td style="text-align: center;">(b)</td> <td>On Acceptance: Twenty (20%) percent of the Contract Price of Goods received shall be paid on successful installation, commissioning and training upon submission of claim supported by the acceptance certificate issued by the Purchaser subject to validity of PS.</td> </tr> <tr> <td style="text-align: center;">(c)</td> <td>The LC for 100% value of the contract shall be established after deducting the agency commission payable if any, to the Indian agent from the FOB / FCA value.</td> </tr> <tr> <td style="text-align: center;">(d)</td> <td>The LC will be confirmed at the Bidders cost, if requested specifically by the Bidder. All bank charges abroad shall be to the account of the beneficiary i.e. Bidder and all bank charges in India shall be to the account of the opener i.e. purchaser. If LC is requested to be extended/ reinstated for reasons not attributable to the purchaser, the charges</td> </tr> </table>	A	Payment for Goods supplied from abroad:	Payment of foreign currency portion shall be made in currency of the Contract in the following manner:		(a)	On Shipment: Eighty (80%) percent of the Contract Price of the Goods shipped shall be paid through irrevocable letter of credit opened in favour of the Bidder in a bank in its country, upon submission of documents specified in GCC Clause 2.15.	(b)	On Acceptance: Twenty (20%) percent of the Contract Price of Goods received shall be paid on successful installation, commissioning and training upon submission of claim supported by the acceptance certificate issued by the Purchaser subject to validity of PS.	(c)	The LC for 100% value of the contract shall be established after deducting the agency commission payable if any, to the Indian agent from the FOB / FCA value.	(d)	The LC will be confirmed at the Bidders cost, if requested specifically by the Bidder. All bank charges abroad shall be to the account of the beneficiary i.e. Bidder and all bank charges in India shall be to the account of the opener i.e. purchaser. If LC is requested to be extended/ reinstated for reasons not attributable to the purchaser, the charges
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		thereof would be to the Bidders' account. Payment of local currency portion shall be made in Indian Rupees within thirty (30) days of presentation of claim supported by a certificate from the Purchaser declaring that the Goods have been delivered and that all other contracted Services have been performed.
	B	Payment for Goods and Services supplied from India:
		The payment shall be made in Indian Rupees, as follows:
	(a)	100% after Supply, Installation, Commissioning, Training and Acceptance, subject to validity of Performance Security to cover warranty obligations
	(b)	E-Payment: All payments, CSIR-NAL prefers to make Electronic Transfers (RTGS) through State Bank Of India, NAL Branch, Bengaluru.
	(c)	All payments due under the Contract shall be paid after deduction of statutory levies at source (like ESIC, Income Tax, etc.), wherever applicable.
GCC 2.27.1	Liquidated Damages / Penalty Clause	
	(a)	As time is the essence of the contract, Delivery period mentioned in the Purchase Order should be strictly adhered to. Otherwise the bidder will forfeit EMD/SD and also LD clause will be applicable /enforced
	(b)	If the Bidder fails to Supply, Install and Commission the system as per specifications mentioned in the order within the due date including training, the Bidder is liable to pay liquidated damages of 0.5% of order value per every week of delay subject to a maximum of 10% beyond the due date. Such money will be deducted from any amount due or which may become due to the Bidder
	(c)	CSIR-NAL reserves the right to cancel the order in case the delay is beyond the due date. Penalties, if any, will be deducted from the Security Deposit
	(d)	The maximum amount of penalty shall be 10% .
	(e)	The liquidated damages shall be levied on the delivered price of the delayed Goods or unperformed Services or contract value.
GCC 2.34.1	Applicable Law / Jurisdiction	
	The place of jurisdiction is Bengaluru , India.	
GCC 2.35.1	Notices	
	For notices,	the Purchaser's address is The Director CSIR- National Aerospace Laboratories PB No.1779, HAL Airport Road, Kodihalli, Bengaluru - 560017 Karnataka-India Tel #: 00 91 80 25086040/6041/6044 Fax #: 00 91 80 25269611 Email: purchasек@nal.res.in , mkala@nal.res.in
GCC 2.41	Integrity Pact – The integrity pact is not to be signed. However, efforts must be made to realize the objectives & spirits thereof.	

CHAPTER 3

(To be filled by the bidder and enclosed with the Technical Bid)

SCHEDULE OF REQUIREMENT

The Schedule of Requirement must clearly specify **the time frame required (Schedule) for delivery of goods and services to be completed** by the bidder (in reference to Scope of Supply given in Clause-4.2 of Chapter-4) if the Contract is awarded for the offer / proposal submitted by the bidder in response to this Tender.

A) Delivery Schedule:

Sr. No.	Brief Description of Goods and Services	Quantity & Unit	Delivery Schedule

Period of delivery shall start from : _____

B) Term of delivery / Delivery Term :

Goods from Abroad	
Goods from India	

C) Time frame required for conducting installation, commissioning of the equipment, acceptance test, training, etc. after the arrival of consignment or before dispatch of equipment:

Sr. No.	Activity	Time Frame
1	Site Preparation (if required)	
2	Installation & Commissioning	
3	Acceptance Test	
4	Training	
5		

Place : _____

Signature of the Bidder : _____

Date : _____

CHAPTER 4

SPECIFICATIONS AND ALLIED TECHNICAL DETAILS

4.1 Detailed Specification

4.1.1: Description

- CSIR-National Aerospace Laboratories is planning to procure Unmanned Aerial Vehicle (UAV) having Vertical Take-off and Landing capability to carry 95.0 kg of underslung assembly load and 16.0kg on-board payload. Total of 111 kg.
- The Schematic representation of field operations is depicted in Figure 4.1.

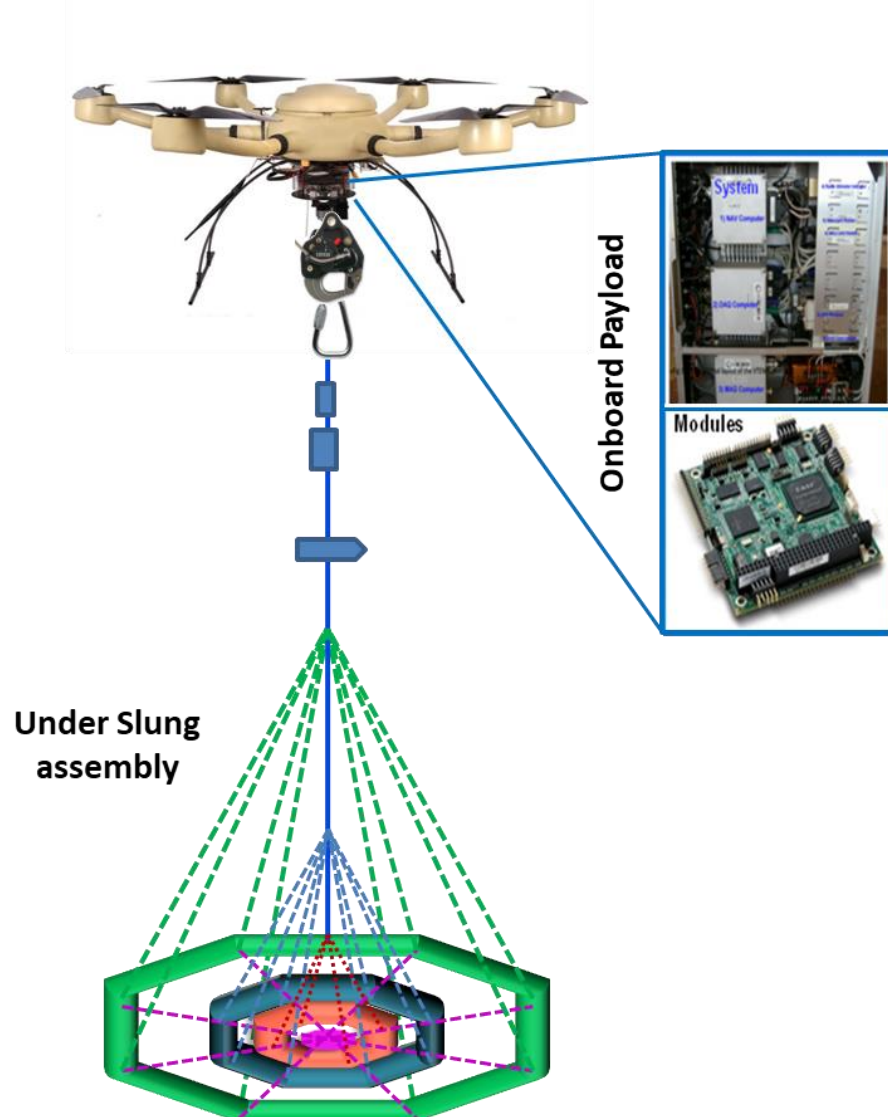


Figure 4.1: Schematic representation of the Field operations

Proposed UAV will be used for survey applications in forests, hilly terrains and less populated areas. During surveying the targeted area, UAV has to fly at an altitude of 35.0 Meters Above the Ground Level (AGL) and the under-slung load will be at 15 meters below the UAV. The payload system requires calibration before the survey operations and the calibration is carried out at an altitude of 1.0 Km AGL.

The UAV shall have the following features

- UAV is required to Take off vertically and Land vertically.
- UAV is required to carry 111.0 kg payload at 50% - 60% of maximum available Thrust at cruise condition.
- The UAV will experience an additional Aerodynamic Drag of 5kg during the cruise flight due to the underslung load.
- While surveying, UAV needs to follow a predefined raster scan way points autonomously.
- Ground Command Control station should have the features to upload the flight plan for autonomous flight operations.
- RTK-GPS/DGPS system has to be included as part of the supply for centimetre level accuracy for survey operations.
- A separate Laser Altimeter needs to be installed on the UAV for measuring accurate altitude above the ground level.
- UAV should provide required interfaces to send UAV flight data along with GPS / Laser altimeter to another Data Acquisition System (Part of the payload).
- Provision for integration of under slung payload along with a weak link mechanism and electronic quick release mechanism should be provided on the UAV.
- UAV should be able to fly in 10 knots cross winds.
- UAV shall able to fly in the presence of the magnetic pulse of 537 nT in 100 micro seconds generated due to the under slung load at 15m blow the UAV.
- In addition to supplying power to its own propulsion system, UAV should be able to additional supply power at 24 V, 65 AH to the payload.
- UAV Mission requirements: Shall Take off vertically up to an altitude of 35.0 Meters AGL with the underslung load and scan the intended area within 10Kms range.
- Payload Calibration requirements: UAV Shall Take off vertically and carry the slung load up to an altitude of 1000.0 Meters AGL and hover for 5 minutes approximately.
- Detailed requirements/specifications are given in below sections

4.1.2: Performance Parameters

Parameter	Description	Value / specification
Take-off and Landing	Vertical Take-off and Landing	To Take off & Land from/on a level ground
Speeds	operating ground speed at sea level	36 KMPH- 40 KMPH in the presence of steady winds of 10KMPH
Range	Maximum Range in still Air	At least 10.0 Km
Endurance	Mission + Hover Time	Minimum 45 minutes
Altitude	Maximum Take-off altitude (ISA+20)	2.0 Km
	Maximum attainable height above the ground level	1.0 Km
	Operational envelope under normal conditions (combinations of altitude, speed)	35.0 Meter above ground level & 40 KMPH forward speed

	Operational envelope under Emergency conditions (combinations of altitude, speed)	35.0 Meter above ground level & 20 KMPH forward speed after releasing the payload safely
Power	50% -60% Thrust at cruise condition	$1.7 \leq T/W \leq 2$
Stability & Control	Stable flight Envelope without pilot input	Autonomous operation
	Emergency conditions Pilot can takeover with ease	Ease of operation
Payload / Aerodynamic load	On Board Aircraft	16.0 kg (Z Axis)
	Under Slung Assembly (Static load)	95.0 kg (Z Axis)
	Under Slung Assembly (Dynamic load)	Shall be computed for 15m length slung body for UAV forward flight
	Aerodynamic Load of under slung assembly	5.0 kg (Drag Force, X Axis @ 40 KMPH)

4.1.3: Equipment details

Top level interface details among various on-board avionics and on-board payload is shown in Figure 4.2. External payload 1, External payload 2 and Camera (yellow boxes) will be installed by the user and the rest of the components needs to be part of the deliverables from the vendor. As shown in the figure, all external payloads need to be powered by the UAV additional power supply. This additional power requirement is estimated to be 65 AH at 24 V. Apart from power supply, there shall be an appropriate (RS422) communication interface needs to be provided between Payload 2 and Autopilot for sending real time data from autopilot to payload. As shown in the figure, Laser altimeter and DGPS/RTK GPS needs to be integrated to the aircraft. Requirement specifications of the major equipment are described below:

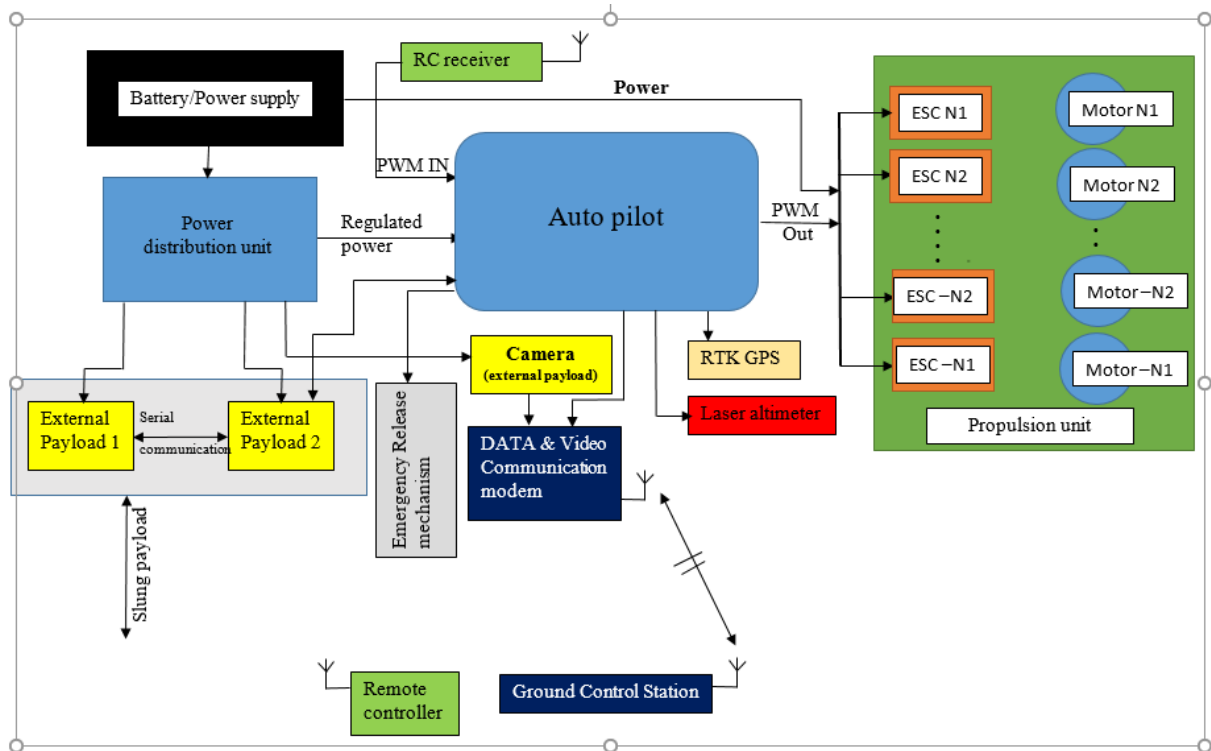


Figure 4.2: Schematic representation of the on-board avionics & on-board payload

4.1.3.1 Autopilot

The UAV shall be equipped with an autopilot system having minimum duplex redundancy hardware. Autopilot shall be able to stabilize the UAV in all axis and carryout the intended mission autonomously. Autopilot needs to be integrated with DGPS / RTK GPS for better navigational accuracies and the DGPS/RTK GPS data to be sent to DAC through serial interface RS-422. Laser altimeter needs to be

integrated and its measurements need to be sent to user installed On-board data acquisition system (DAC) through serial interface RS-422.

User shall be able to fly raster scan mapping experiments using the autopilot autonomously. In the event of communication failure or low battery signal UAV shall return to base station (It shall be possible to specify base station details along with flight plan) and land automatically. In emergency conditions human pilot shall be able to take over and land the UAV safely.

The detailed requirements are given below: There shall be an additional interface to the Payload release mechanism. On user request from the command control station or on request from automatic algorithm autopilot shall be able to release the payload quickly.

Parameter	Value/description	Additional information
Sensors		
Accelerometers	Minimum $\pm 2g$ Accelerometers (3 axes)	(all axes redundancy)
Angular velocity	Minimum $\pm 300\text{deg/s}$	
Magnetometers (3 axes)	Minimum $\pm 6\text{Gauss}$ (compensated)	
Static pressure	Minimum range (50-115kPa)	
Dynamic pressure	3Pa (8km/h sea level) to 400Pa (100km/h sea level)	
Voltage	Input voltage sensor	
Temperature	Internal temperature sensor	
Other performance requirements		
Map View	Selectable form main map sources (google maps, mac, open maps...)	Map View in the ground control station in real time
Multiple Control Stations	Multiple control stations available for controlling or monitoring	Optional
Route	Intuitive user interface for waypoint & route creation	Navigation
	Inflight mission edit from GCS.	
Mapping Tools	Automatic mapping route generation by selecting the target surface area	Mapping Tools
Flight Modes	Fully autonomous flight, assisted control and manual control	Flight Modes
Safety Pitot	Safety pilot can take manual aircraft control at any time during the operation.	Safety Pitot
	Joystick can be connected by wire to the control station or using an onboard receiver.	
Fail Safe Modes	Configure custom automatic actions to take place on event detection	
	Actions: go home	
	Events: flight time, distance, data link lose, GPS lose, battery low	
	Geo fencing feature to be provided	
Warnings	Customizable visual and sound warnings	
Qualification	DO-178B / ED-12 & DO-254 evidences for airworthiness certification	
Redundancy	Dual or triple module redundant configurations	
Fault Tolerant	Fail safe configurations	
Operational Environmental specs		
Temperature	-10°C to +50°C	
Protection Rating	IP67	

4.1.3.2 GPS

The Mission requirements mandate centimeter level accuracy of the position of the UAV while carrying out the survey operation and hence vendor needs to provide either DGPS or RTK GPS. This GPS needs to be interfaced with autopilot for better performance. Typical GPS details are given below:

GPS Features		
Type	RTK or DGPS	
Accuracy	Centimetre Accuracy	
GNSS	BeiDou, GLONASS, GPS / QZSS, Any other type	
Interface	RS422/UART/USB/SPT/DDC(I2C)	
Temperature	-10°C to +50°C	Operational temperature
Carrier Phase output	Yes	
Data Logging	Yes	
Moving Baseline Support	Yes	
Programmable Flash Memory	Yes	
Approvals	FDA	

4.1.3.3 Laser Altimeter

The Mission requirements mandates centimeter level accuracy of the altitude information. The measured readings from the laser altimeter need to be sent to the payload for knowing the exact altitude of the UAV. Aircraft autopilot may or may not use this information for flying operations. Typical Laser altimeter specifications are given below:

Laser Altimeter Specifications		
Range	0.1 to 120m (Natural Targets)	
Resolution	1 centimetre	
Update Rate	16 readings / second	
Accuracy	± 1 centimetre (70% reflective target @ 20 °C)	
Outputs and Interfaces	RS422 / I2C / Analog	
Connections	Plug & socket, micro USB	
Optical Aperture	51 millimetre	
Beam Divergence	0.20	
Operating Temperature	-10°C to +50°C	Environmental
Approvals	FDA	

4.1.3.4 Ground control station / Command control station

UAV and the external payloads are planned to be controlled / operated using Ground Control Station. Vendor needs to provide an option for the user to install an application on the Ground Control Station that controls the external payload. Typical hardware / software requirements of the Ground Control Station are given below:

Ground Control Station Hardware System Specifications		
Environmental Protection	IP66 when closed	
Operating Temperature	-10°C to +50°C	Operational temperature
Case features	Rugged plastic case, side handles, carry handle, wheels, pressure purge valve, shoulder strap (optional)	
Antenna Connections	Multiple	
Battery Type	Lithium Ion	
Battery Operation Time	2 hrs typical	

Connections	2 serial (RS-232), 5 USB, 2 Ethernet, 1 Composite Video in (IMPERX video device needed),1 VGA in (optional), 1 Microphone in, 1 Audio out, PCMCIA slot, HDMI	
Display	17" to 21" TFT (Touch optional)	
Brightness	1600 nits	
Signal Source	Selectable	Selection should be possible between the main GCS computer and additional computer/video receiver unit
Accessories	AC/DC adapter 110 - 240 VAC to 24 VDC	24 VDC or suitable
Ground Control Station Software Specifications		
Artificial Horizon	Displays aircraft Attitude, Altitude, Speed etc	
Quick command buttons	Take-off, Altitude Change, Land, Home, Quick release of Under slung load etc	
Map View for mission planning	Selectable from main map sources (google maps, mac, open maps...) or customizable using JPG / PNG images	
Route Planning	Intuitive user interface for waypoint & route creation and Inflight mission edit.	
Status Displays	Status information of Battery, GPS, communication etc	Additional display for payload
Live Plots	Plotting of transmitted parameters for in flight analysis and gain tuning	
Gain Tuning	In flight change of aircraft parameters and gains through telemetry	Feature needs to be given with protection mechanism
Battery & Charging		
Charging Temperature	5°C to 40°C	
Charger	To be provided	
Battery	Specification	

4.1.3.5 Communication system

UAV needs to be in contact with the Command and Control Station through wireless communication system. Typical frequency for the communication to be used is preferably 2.4 GHz. Apart from UAV flight parameters, payload information also need to be sent through telemetry unit. The mission profile including Navigation waypoints will be planned in Ground Control Station and will be uploaded to on-board system through this communication system. Video captured by the on-board camera needs to be transmitted through this system. The communication system shall give at least 10 km Line of Sight (LoS) range for mission operation. Typical parameter specifications are given below:

Communication System		
Communication Range (RF Line of Sight) for Data, Control and Video	>10kms (Aerial Distance)	The communication range is RF line of sight and the desired value shall be minimum 10 km.
Data link Frequency Band	2.4Ghz	Preferable. Vendor may suggest alternative
Capability	Transmit control commands from Ground Control Station (GCS) to UAV.	

	Transmit UAV parameters to GCS.	
Encryption	AES 128 / 256	
Data Rate	100 Mbps	
Power output	Less than 2W	Radiated power
Ambient temperature	-10°C to +50°C	
Weight	Less than 500g	
Dimensions	Less than 120 x 80 x 50 mm	
IP rating	IP-67	
AP Data to GCS Serial Port (RS232)	1	
Spare Serial Port (RS232)	1	
IP / LAN Port	1	
USB	For software update	
Outputs and Interfaces	Serial, I2C & Analog	

4.1.3.6 Other essential equipment / requirements

UAV needs to qualify minimum requirements laid down by Director General of Civil Aviation (DGCA) wide its CAR – “CIVIL AVIATION REQUIREMENTS SECTION 3 – AIR TRANSPORT SERIES X PART I” and its related rules and regulations. Other essential equipment / requirements are given below:

Other Essential instruments		
	Flashing Anti-collision Strobe lights	
	ADS-B Out	Transceiver FCC 47CFR part 87 CAP 1391 “Basic Device
	Detect and avoid capability	May be Part of autopilot / GCS
	Flight data logging	Data should be logged on the onboard memory and on the GCS for access after the mission. (mandatory) File storage location can be defined by the operator (optional)
	Barometric equipment with capability for remote sub-scale setting	
	Wiring	Shall not be along sharp edges. No soldering between cables Adequately secured connections to prevent loosening

4.1.4: Environmental Parameters

UAV needs to qualify minimum requirements laid down by Director General of Civil Aviation (DGCA) wide its CAR – “CIVIL AVIATION REQUIREMENTS SECTION 3 – AIR TRANSPORT SERIES X PART I” and its related rules and regulations. The essential environmental requirements and its qualification standards are given below. Vendor may qualify equipment to any other equivalent standards and provide the artifacts to the user for taking permission from DGCA.

Parameter	Value	Description
Operational Temperature Range	-10°C to +50°C	MIL-STD-810F-520.2 Or equivalent from DO-160g or any other equivalent
Altitude	10,000 ft. unpressurized	By demonstration / analysis

Humidity Range	10% to 95% RH	MIL-STD-810F-507 Or equivalent from DO-160g or any other equivalent
Other Environmental Parameters	Ability to withstand dust, drizzle, snow, saline and humid conditions	MIL-STD-810F-520 Or equivalent from DO-160g or any other equivalent
Vibrations	55-200 Hz / 20g	MIL-STD-810F-514 Or equivalent from DO-160g or any other equivalent
Acceleration	10g-20g	MIL-STD-810F-513 Or equivalent from DO-160g or any other equivalent
EMI/EMC	CE101 /102 - Conducted Emission, CS103 /- Conducted Susceptibility RE101 - Radiation Emission, Magnetic field RE102 - Radiation Emission, Electric field RS101 - Radiation Susceptibility, Magnetic field RS102 - Radiation Susceptibility, Electric field	MIL-STD-461F Or equivalent from DO-160g or any other equivalent
DUST		IP 51 W or MIL-STD-810F- 510 Or equivalent from DO-160g or any other equivalent
Fungus / Mold Growth		MIL-STD-810F-508 Or equivalent from DO-160g or any other equivalent
Lightening	Suitable protection to be provided	

4.1.4.1: Electromagnetic radiation due to under slung payload:

UAV shall able to fly in the presence of the magnetic pulse of 537 nT in 100 micro seconds generated due to the under slung load at 15m below the UAV.

Specifications of Electromagnetic Pulse generated by the transmitter in the proposed Transient Electromagnetic System			
1.	Transmitter-Receiver Geometry	:	In-loop, Vertical dipole
2.	Transmitter Coil & Number of turns	:	Circular / Octagonal with diameter 8.44 meters & 4 turns
3.	Peak Dipole Moment	:	Up to 10,000 NIA (number of turns*Area*Current)
4.	Peak Current	:	Up to 50A
5.	Pulse Shape	:	Trapezoidal, Square
6.	Polarity	:	Bipolar
7.	Peak Current range	:	0 to 50A, settable in steps of 5A
8.	Base frequency	:	25Hz, 50Hz,75Hz and 100Hz, user selectable
9.	Accuracy @ Maximum current	:	± 1A
10.	Ripple	:	≤ 1% peak to peak
11.	Pulse Width (On Time)	:	1 to 2 ms at 100Hz base frequency 1.35 to 2.7ms at 75 Hz base frequency 2.0 to 4.0ms at 50 Hz base frequency 4 to 8 ms at 25 Hz base frequency
12.	Duty Cycle	:	Adjustable 20% to 40%, in steps of 1%
13.	Off time	:	2 mS (minimum)
14.	Current pulse rise time	:	< 500 μS at 50A peak current
15.	Current pulse fall time	:	≤ 60 μS at 50A peak current
16.	Input Power provided	:	24±2 V DC

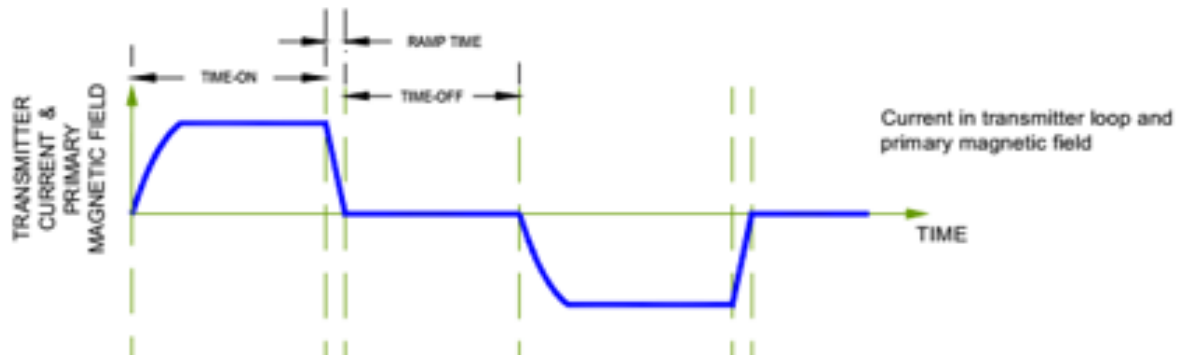


Figure 4.3: Typical Current pulse given to the transmittor coil

4.1.5: Other Certification Requirements

Qualification tests for Autopilot and Communication system		
Software	It shall comply with DO-178 Level C standard	
Hardware	The hardware lifecycle has to be determined through established quality control procedure along with component reliability, service indicating successful operation of component and continuous monitoring. It shall comply with DO-254 standard	
Structure		
Load Limits	Airframe structure shall be able to withstand limit load without failure, malfunction or permanent deformation	
FOS	Factor of safety	1.2 times the maximum load
Accessibility	Removable Screw, bolt, nut, pin or other fastener	All critical bolts of main load carrying structures to be tightened using a locknut. All bolts to be locked using thread locking compound It should be ensured that all bolts have at least two threads sticking out of the nut (except for self-locking nut)
Clearances & Safety	Minimum clearance of the propeller blade from structure and/or components and from the ground	
Landing	Landing gear	Landing gear shall not fail but shall yield in a test showing its reserved energy absorption capacity
Fabrications	Fabrication	The fabrication process such as gluing, spot welding, heat-treating etc must be performed according to an approved process specification and shall be substantiated by a test program. (As per Annexure XIV of CAR Series X Part I)
Life	Life of the equipment (Indian operating conditions)	5years/1000 landing
Identity & Registration	Identification plate (For inscribing UIN)	Should be fire resistant
Impact on the ground object	Maximum kinetic Energy on impact for all combinations of Mass and speed	95 kJ
Power Plant		
Parameter	Compliance Criteria	Means of Compliance
	Operating pressure and temperature for battery charging / discharging	
	Toxic / explosive gases	Should not emit

	Corrosive fluid	Should not leak such fluid which cause damage to the structure
	Motor Controller	Should have protection for over current and over heating
	Propeller	Should be weather resistant
	Motors	Should be weather resistant and operate in slight drizzles
No Permission No Take-off (DGCA Regulation)		
Autopilot Communication Modem	Firmware	On-board computer shall have the protections against tampering (Software) Shall have safe and secure methodology for firmware update Shall have authentication procedure to change flight parameter
Autopilot Communication Modem	Hardware	On-board computer shall have protection from tampering A well-established mechanism to replace hardware like Radio, GPS and Flight controller
Safety Features		
Communication	Loss of command and Control link	Shall have a provision for alerting the safety pilot with Aural and Visual Signal Should be able to return to Home if signal is lost for more than a specified period of time
Propulsion	Failure of one or more propulsion motors	The UAV must be able to fly in spite of one motor failure. The Payload can be released if needed. (It is preferred to land safely with the payload)
Navigation	Fencing/ Perimeter	The UAV must operate in the specified Geo-Fence / Geo-Perimeter. It has to return to the specified boundary or return to home in case of going out of the boundary.
Landing	UAV Safety during Landing	The UAV must be able to land safely.
Payload Release	Weak Link Release Mechanism	A weak link mechanism is mandatory to release the payload in case of an emergency.
	Quick Release Mechanics	A quick release mechanism is to be installed along with the cable to release the payload in emergency.
Low Battery	Return to home	Battery low voltage, communication loss for more than 7 seconds, drift out of the specified boundary limits.

4.2 Scope of Supply

Bidder has to take up following work items.

- Supply of Autonomous VTOL UAV to carry 111kg payload
- Supply of Transportation box(es) for the UAV.
- Supply of Tools for assembly, disassembly and minor repairs
- Supply of Cargo hook for integration of slung load
- Integration of Slung load of 95.0 kg on to the UAV
- Ensure stable flight with the slung load
- Supply of Weak-link Mechanism and Quick Release Mechanism
- Integration of weak-link mechanism and quick release mechanism to release the slung load under emergencies
- Provision of installing 16.0kg on-board system
- Supplying of Ground Control System
- Provision in the ground control station to install user application for setup and access the external payload
- Supply and Integration of DGPS/RTK GPS to the navigation system
- Supply and Integration of Laser Altimeter
- Supply of required artefacts for getting NPNT (No Permission No Take-off) certificate from DGCA
- Supply of MIL qualification tests artefacts
- Provision for additional power supply at 24 V, 65 AH for on-board payload
- Real time flight parameters over RS-422 / serial port to the on-board system

- Supply of certification artefacts of UAV Avionics / Autopilot as specified in relevant sections of the document.
- Supply of Spare batteries (2 nos)
- Supply of Spare motors, ESC, Propeller & Fasteners (**Minimum Quantity to be decided by the vendor**)
- Pre-Dispatch inspection & full demonstration before the dispatch Operational training in Bangalore INDIA

Scope of Supply includes the following:

a) Delivery of UAV System along with Spares

The UAV has to be delivered to CSIR-National Aerospace Laboratories, Bangalore, Karnataka, India as specified in the purchase order. All costs for the packaging, safety, transportation and spares of the UAV is to be borne by the supplier.

b) Certification of UAV

1. All Remotely Piloted Aircraft for civil applications in India required to meet the CAR CIVIL AVIATION REQUIREMENTS SECTION 3 – AIR TRANSPORT SERIES X PART I. The intended UAV is required to meet the regulations.
2. In addition to CAR CIVIL AVIATION REQUIREMENTS SECTION 3 – AIR TRANSPORT SERIES X PART I, Environmental conditions and specific certification standards that the intended UAV needs to meet are given in section 2 and Section 4 of this document.

c) Training for UAV operation

- Training has to be provided to our UAV pilot for operation and handling of the UAV and equipment.
- Training on handling components. Assembly and transportation of UAV to be provided.
- Training for operation of GCS to be provided.
- Training has to be provided to carry out a complete mission .

d) Field demonstration of UAV with payload

- Supplier should demonstrate the mission as specified in 4.1.1 using a dummy payload.
- Supplier should demonstrate the mission as specified in 4.1.1 using actual payload.
- Supply of the equipment / system as specified in Clause 4.1 above
- Installation & Commissioning as specified under Clause No.4.3.3
- Training as specified under Clause No.4.4
- On site comprehensive Warranty as specified under Clause No.4.5

4.3 Inspection & Tests

4.3.1 General

- (i) The Supplier shall at its own expense and at no cost to CSIR-NAL carry out all such tests and/or inspections of the Goods and Related Services as are specified in the chapter 4 or as discussed and agreed to during the course of finalization of contract.
- (ii) The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at the point of delivery and/or at the Goods final destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data - shall be furnished to the inspectors at no charge to CSIR-NAL
- (iii) Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.
- (iv) CSIR-NAL or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to CSIR-NAL and what kind of inspections and tests CSIR-NAL requires and where they are to be conducted. CSIR-NAL shall notify the Supplier in writing in a timely manner of the identity of any representatives retained for these purposes.
- (v) Should any inspected or tested Goods fail to conform to the specifications, the purchaser may reject the goods and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Purchaser.

- (vi) The Purchaser's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival at final destination shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser or its representative prior to the Goods shipment.
- (vii) The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
- (viii) With a view to ensure that claims on insurance companies, if any, are lodged in time, the bidders and /or the Indian agent, if any, shall be responsible for follow up with their Principals for ascertaining the dispatch details and informing the same to the Purchaser and he shall also liaise with the Purchaser to ascertain the arrival of the consignment after customs clearance so that immediately thereafter in his presence the consignment could be opened and the insurance claim be lodged, if required, without any loss of time. Any delay on the part of the bidder/ Indian Agent would be viewed seriously and he shall be directly responsible for any loss sustained by the purchaser on the event of the delay.
- (ix) Before the goods and equipment are taken over by the Purchaser, the Supplier shall supply operation and maintenance Manuals together with Drawings of the goods and equipment built. These shall be in such details as will enable the Purchase to operate, maintain, adjust and repair all parts of the works as stated in the specifications.
- (x) The Manuals and Drawings shall be in the ruling language (English) and in such form and numbers as stated in the Contract.
- (xi) Unless and otherwise agreed, the goods and equipment shall not be considered to be completed for the purposes of taking over until such Manuals and Drawing have been supplied to the Purchaser.
- (xii) On successful completion of acceptability test, receipt of deliverables, etc and after the Purchaser is satisfied with the working of the equipment, the acceptance certificate signed by the Supplier and the representative of the Purchaser will be issued. The date on which such certificate is signed shall be deemed to be the date of successful commissioning of the equipment. Acceptance certificate form as given in Annexure-I (Chapter 8) should be signed by authorised representative of Supplier & Purchaser.
- (xiii) Installation demonstration is to be arranged by the supplier and the same is to be done within 30 days of the arrival of the equipment at site.

4.3.2 Manufacturer's Inspection Certificate

After the goods are manufactured and assembled, inspection and testing of the goods shall be carried out at the supplier's plant by the supplier, prior to shipment to check whether the goods are in conformity with the technical specifications. Manufacturer's test certificate with data sheet shall be issued to this effect and submitted along with the delivery documents. The purchaser reserves the options to be present at the supplier's premises during such Pre- dispatch inspection and testing.

4.3.3 Installation, Commissioning & Acceptance Test

The acceptance test will be conducted by the Purchaser, their consultant or other such person nominated by the Purchaser at its option after the equipment is installed at Purchaser's site in the presence of supplier's representatives. The acceptance will involve trouble free operation. There shall not be any additional charges for carrying out acceptance test. No malfunction, partial or complete failure of any part of the equipment is expected to occur. The Supplier shall maintain necessary log in respect of the result of the test to establish to the entire satisfaction of the Purchaser, the successful completion of the test specified.

In the event of the ordered item failing to pass the acceptance test, a period not exceeding two weeks will be given to rectify the defects and clear the acceptance test, failing which, the Purchaser reserve the right to get the equipment replaced by the Supplier at no extra cost to the Purchaser.

Successful conduct and conclusion of the acceptance test for the installed goods and equipment shall also be the responsibility and at the cost of the Supplier.

4.4 Training at CSIR-NAL

1)	Location	Bengaluru, Karnataka, India
2)	Number of persons	6 persons
3)	Period of Training	2 weeks from the date of installation / commissioning
4)	Nature of Training	<p>The training should include the following</p> <ul style="list-style-type: none"> a) Setup of the UAV for Flying with pre-flight checks b) Initiation of the UAV for flight c) Take off and landing d) Mission with waypoint navigation and change of waypoint during flight. e) Range testing of 10kms f) Calibration flight of lift off to 1 km AGL, hovering for 5 mins and descend to ground g) Fail safe features and operation h) GCS operations i) Functional operation j) Safety checks k) Motor checking and servicing l) Propeller checking and Replacement m) Quick Release mechanism with dummy under slung payload n) Maintenance procedures

4.5 Incidental Services

(i) On site Comprehensive Warranty:

- **1 Year** from Installation & Commissioning and date of acceptance
- In case the Equipment / System remains non-operational for more than **30 days** then warranty period will be extended for the equivalent period for which Equipment / System remained non-operational. Warranty extension in such case shall be done without prejudice to any other Term & condition of the contract

4.6 Delivery Schedule (including supply, installation, commissioning, training & acceptance)

Delivery of the Item		Installation & Commissioning		Training At CSIR_NAL, if any	Acceptance of the item
Days/ Weeks/Months	Location	Days/ Weeks/Months from the date of receipt of equipment	Location	Days/ Weeks/Months from the date of Installation & Commissioning	Days/ Weeks/Months from the date of Installation, Commissioning & Training
6 months from placement of Purchase Order/Letter of Credit	CSIR-NAL, Bengaluru-560017, Karnataka, India-	30 days from the delivery of item	CSIR-NAL, Bengaluru-560017, Karnataka, India-	2 weeks from Installation	Within 2 days from the training

4.7 Commercial evaluation of bid

The bid will be treated as **incomplete** if bidder has **not quoted** for all the components given in scope of supply (clause 4.2) and **the incomplete bid will be rejected**. The bidder should also quote for all incidental services (clause 4.6). The bid will be commercially evaluated for the components in the scope of supply.

CHAPTER 5
Eligibility & Qualification Requirements

The following shall be eligibility criteria for selection of Bidders technically.
(Documents to be part of Technical Bid)

5.1 Eligibility Criteria

a) Legal Valid Entity:

- (i) The Bidder shall necessarily be a legally valid entity either in the form of a Limited Company or a Private Limited Company registered under the Indian Companies Act, 1956 or Country of Origin.
 - (ii) Bidder in the form of consortium and Partnership is not permitted.
 - (iii) **Copy of Certificate of Incorporation** issued by Registrar of firms/companies is to be submitted in support of this criterion.
- b) Indian Agent quoting on behalf of Foreign Principal Bidder should submit a certified **copy of an Agreement/Memorandum of understanding (MOU)** between both the parties.
- c) The bidder shall furnish documentary evidence to demonstrate that the bidder satisfies the bidders' **eligibility criteria** as per **Annexure-G of Chapter- 8**.
- d) An **undertaking (self-certificate)** is to be submitted that the Organization has not been blacklisted during last 3 years by any Central / State Government Department/Organization in the form as per **Annexure-H of Chapter- 8**.
- e) The Bidder should possess valid GST and PAN. Attested copies of PAN and GST shall be acceptable

5.2 Technical Qualification Criteria

- a) The Bidder should be a manufacturer /authorized representative of a manufacturer who must have designed, manufactured, tested and supplied the equipment(s) similar to the type specified in the "Technical Specification". Authorised representative / Indian Agent to submit the **Manufacturers' Authorization Form Chapter-8: Annexure D** with the technical bid.
- b) Equipment / System offered must be of the most recent series/models incorporating the latest improvements in design. The models should be in successful operation for at least one year as on date of Bid Opening. The bidder (OEM/Direct Distributor/Dealer) should have supplied and installed during **past 2 years, at least two similar equipment / systems** as mentioned in Chapter-4.
- The Bidder should furnish the information on all past supplies and satisfactory performance during past 3 years in the **Performance Statement Form (Chapter-8, Annexure E)**. Bidders shall invariably furnish documentary evidence (Client's certificate) in support of the **satisfactory operation of the equipment / system**.
- c) Details of Service Centres and information on service support facilities that would be provided after the warranty period (in the **Service Support Form-Chapter-8 Annexure-F**).
- d) Foreign bidder/Bidders quoting directly, should submit a letter of Authorisation in favour of Indian Agent/Representative indicating complete address, contact person and validity of Authorization if any along with their technical bid. Foreign bidder/Bidders quoting directly should ensure that adequate and specialized expertise is already available **or** will be made available following the execution of the contract in the Purchaser's country, to ensure that **the support services are responsive and adequate** as per **ITB 1.13.2(c)**.

5.3 Financial Qualification Criteria

- a) The Bidders are requested to submit **Audited Balance Sheet** for the **last three financial year** alongwith Technical Bid.

5.4 Either the Indian Agent on behalf of the foreign principal or the foreign principal directly could bid in a tender **but not both**. However, the offer of the Indian Agent should also accompany the authorization letter from their principal. Further, to maintain sanctity of tendering system **one Indian agent cannot represent two different foreign principals in one tender**.

CHAPTER - 6A

**PRICE SCHEDULE FOR GOODS BEING OFFER FROM ABROAD
(BIDDER SHOULD QUOTE IN THIS FORMAT)**

Name of the Bidder & Address						
Tender No.:						
Quotation No.					Date:	
Quotation Valid upto						
Country of Origin				Currency		
Sr. No.	Description of Item	HSS/SAC Code	Unit	Quantity	Rate	Amount
1						
2						
3						
4						
Sub-Total: Ex-Works Price						
Less: Discount% (if any)						
Sub-Total : Net Ex-Works Price						
Add: Packing & Forwarding Charges (if any)						
Add: Inland Freight Charges						
Sub-Total: INCOTERM: FCA/FOB International Airport,Country						
Add: Freight upto Bengaluru Airport						
Add: Insurance Charges (from Warehouse to Warehouse) (if any)						
Total (A):						
OTHER CHARGES						
5	Installation & Commissioning Charges (if any)					
6	Training (if any)					
Sub-Total : Before Tax						
Add: GST on Sr. No.5 & 6 (if applicable)						
7	Bank Charges (if any)					
Total (B):						
Grand Total (A+B): CIP/CIF Charges - Bengaluru Price						
For Sl. No.5 & 6 - TDS will be deducted at actuals.						
OTHER TERMS						
Sr. No.	Approximate weight of the Consignment	Approximate dimensions of the consignment				
1						
2	Mode of Shipment					
3	Port of Destination	Final Destination				
4	Delivery Term (INCO Term)					
5	Delivery Schedule including Item, Installation, Commissioning, Training & Acceptance					
6	Payment Term					
7	Warranty					
NOTE: Agency Commission, if any would be payable only in Indian Rupee as per the Exchange Rate mentioned in the Bill of Entry.						

CHAPTER - 6B

**PRICE SCHEDULE FOR GOODS BEING OFFER FROM INDIA
(BIDDER SHOULD QUOTE IN THIS FORMAT)**

Name of the Bidder & Address						
Tender No.:						
Quotation No.					Date:	
Quotation Valid upto						
Country of Origin				Currency		
Sr. No.	Description of Item	HSS/SAC Code	Unit	Quantity	Rate	Amount
1						
2						
3						
4						
Sub-Total: Ex-Works Price						
Less: Discount% (if any)						
Sub-Total : Net Ex-Works Price						
Add: Packing & Forwarding Charges (if any)						
Add: Transportation Charges (if any)						
Add: Insurance Charges (from Warehouse to Warehouse) (if any)						
Sub-Total : Before Tax						
Add: GST / IGST (against Concessional Certificate)						
Total (A):						
OTHER CHARGES						
5	Installation & Commissioning Charges (if any)					
6	Training (if any)					
Sub-Total : Before Tax						
Add: GST on Sr. No.5 & 6 (if applicable)						
7	Bank Charges (if any)					
Total (B):						
Grand Total (A+B): F.O.R CSIR-NAL						
For Sl. No.5 & 6 - TDS will be deducted at actuals.						
8	Annual Maintenance Contract / Charges					
	Comprehensive			Non-Comprehensive		
Grand Total in Figures						
Grand Total in Words						
OTHER TERMS						
Sr. No.	Approximate weight of the Consignment	Approximate dimensions of the consignment				
1						
2	Mode of Shipment					
3	Port of Destination		Final Destination			
4	Delivery Term					
5	Delivery Schedule including Item, Installation, Commissioning, Training & Acceptance					
6	Payment Term					
7	Warranty					

CHAPTER 7

Contract Form

Contract No. _____ Date: _____

THIS CONTRACT AGREEMENT is made
the [insert: number] day of [insert: month], [insert: year].

BETWEEN

- (1) The Council of Scientific & Industrial Research registered under the Societies Registration Act 1860 of the Government of India having its registered office at 2, Rafi Marg, New Delhi-110001, India represented by National Aerospace Laboratories, Bengaluru (hereinafter called “the Purchaser”), and
- (2) [insert name of Supplier], a corporation incorporated under the laws of [insert: country of Supplier] and having its principal place of business at [insert: address of Supplier] (hereinafter called “the Supplier”).

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz., [insert brief description of Goods and Services] and has accepted a Bid by the Supplier for the supply of those Goods and Services in the sum of [insert Contract Price in words and figures, expressed in the Contract currency(ies)] (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

- 01. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
- 02. The following documents shall constitute the Contract between the Purchaser and the Supplier, and each shall be read and construed as an integral part of the Contract:

(a)	This Contract Agreement
(b)	General Conditions of Contract
(c)	Special Conditions of Contract
(d)	Technical Requirements (including Schedule of Requirements and Technical Specifications)
(e)	The Supplier’s Bid and original Price Schedules
(f)	The Purchaser’s Notification of Award
(g)	[Add here any other document(s)]

- 03. This Contract shall prevail over all other Contract documents. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.
- 04. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
- 05. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Union of India on the day, month and year indicated above.

For and on behalf of the Council of Scientific & Industrial Research

Signed : [insert signature]
in the capacity of [insert title or other appropriate designation]
in the presence of [insert identification of official witness]

Signed : [insert signature]
in the capacity of [insert title or other appropriate designation]
in the presence of [insert identification of official witness]

For and on behalf of the Supplier

Signed : [insert signature of authorized representative(s) of the Supplier]
in the capacity of [insert title or other appropriate designation]
in the presence of [insert identification of official witness]

CHAPTER 8

OTHER STANDARD FORMS

Sr. No.	Name of the Form	Annexure
1	Bid Security Form / Earnest Money Deposit	A
2	Bidder Information Form	B
3	Bid Form	C
4	Manufacturer's Authorization Form	D
5	Performance Statement Form	E
6	Service Support Detail Form	F
7	Eligibility Certificate	G
8	Non Black List Certificate	H
9	No Relation Certificate	I
9	Deviation Statement Form	J
10	Performance Security Form	K
11	Indemnity Bond	L
12	Acceptance Certificate Form	M

NOTE:

1. Forms at Annexure A to J to be submitted along with Technical bid (excluding Annexure-C).
2. The Successful Bidder shall submit Documents with reference to Annexure –K, L and Chapter-7 after Award of Contract as mentioned in Purchase Order.
3. Price bid (Chapter-6) should be enclosed in Financial Bid only along with Annexure-C duly filled.

BID SECURITY FORM

Whereas _____
(hereinafter called the tenderer)

has submitted their offer dated _____
for the supply of _____
(hereinafter called the tender)

Against the Purchaser's Tender No. _____
KNOW ALL MEN by these presents that WE _____
of _____ having our registered office at _____
_____ are bound unto _____ (hereinafter called the "Purchaser")

In the sum of _____

For which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this _____ day of _____ 20____.

THE CONDITIONS OF THIS OBLIGATION ARE:

(1)	If the tenderer withdraws or amends or modifies or impairs or derogates from the Tender in any respect within the period of validity of this tender.
(2)	If the tenderer having been notified of the acceptance of his tender by the Purchaser during the period of its validity
(3)	If the tenderer fails to furnish the Performance Security for the due Performance of the contract.
(4)	Fails or refuses to accept/execute the contract.

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including 45 days after the period of tender validity and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the authorized officer of the Bank)

Name and designation of the officer
Seal, name & address of the Bank and address of the Branch

Note: Whenever the bidder chooses to submit the Bid Security in the form of Bank Guarantee, then he should advise the banker issuing the Bank Guarantee to immediately send by Registered Post (A.D.) an unstamped duplicate copy of the Guarantee directly to the Purchaser with a covering letter to compare with the original BG for the correctness, genuineness, etc.

Bidder Information Form

- (a) [The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted. This should be done of the letter head of the firm]

Date : [insert date (as day, month and year) of Bid Submission]

Tender No : [insert number from Invitation for bids]

01.	Bidder's Legal Name [insert Bidder's legal name]
02.	In case of JV, legal name of each party: [insert legal name of each party in JV]
03.	Bidder's actual or intended Country of Registration: [insert actual or intended Country of Registration]
04.	Bidder's Year of Registration: [insert Bidder's year of registration]
05.	Bidder's Legal Address in Country of Registration: [insert Bidder's legal address in country of registration]
06.	<p>Bidder's Authorized Representative Information</p> <p>Name: [insert Authorized Representative's name]</p> <p>Address: [insert Authorized Representative's Address]</p> <p>Telephone/Fax numbers: [insert Authorized Representative's telephone/fax numbers]</p> <p>Email Address: [insert Authorized Representative's email address]</p>
07.	<p>Attached are copies of original documents of:</p> <p>Articles of Incorporation or Registration of firm named in 1, above.</p>

Signature of Bidder _____

Name _____

Business Address _____

Bid Form

[The Bidder shall fill in this Form in accordance with the instructions indicated No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date : [insert date (as day, month and year) of Bid Submission]

Tender No. :

To : Director, CSIR-NAL, Bengaluru

We, the undersigned, declare that:

(a)	We have examined and have no reservations to the Bidding Documents, including Addenda No.: [insert the number and issuing date of each Addenda]
(b)	We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods and Related Services [insert a brief description of the Goods and Related Services] as specified in Chapter 4
(c)	The total price of our Bid, excluding any discounts offered in item (d) below, is: [insert the total bid price in words and figures, indicating the various amounts and the respective currencies]
(d)	The discounts offered and the methodologies for their application are: Discounts. If our bid is accepted, the following discounts shall apply. [Specify in detail each discount offered and the specific item of the Schedule of Requirements to which it applies.]
(e)	Our bid shall be valid for the period of time specified in ITB Clause 1.16, from the date fixed for the bid submission due date in accordance with ITB Clause 1.19 and it shall remain binding upon us and may be accepted at any time before the expiration of that period
(f)	If our bid is accepted, we commit to obtain a performance security in accordance with ITB Clause 1.41 and GCC Clause 2.12 for the due performance of the Contract
(g)	The following commissions, gratuities, or fees have been paid or are to be paid with respect to the bidding process or execution of the Contract: [insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity]

Name of Recipient	Address	Reason	Amount
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

(If none has been paid or is to be paid, indicate "none.")

(h)	We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.
(i)	We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Signed : [insert signature of person whose name and capacity are shown]

In the capacity of [insert legal capacity of person signing the Bid Submission Form]

Name : [insert complete name of person signing the Bid Submission Form]

Duly authorized to sign the bid for and on behalf of: [insert complete name of Bidder]

Dated on _____ day of _____, _____ [insert date of signing]

MANUFACTURERS' AUTHORIZATION FORM

[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer.]

Date : *[insert date (as day, month and year) of Bid Submission]*

Tender No. : *[insert number from Invitation For Bids]*

To : *[insert complete name and address of Purchaser]*

WHEREAS

We *[insert complete name of Manufacturer]*, who are official manufacturers of *[insert type of goods manufactured]*, having factories at *[insert full address of Manufacturer's factories]*, do hereby authorize *[insert complete name of Bidder]* to submit a bid the purpose of which is to provide the following Goods, manufactured by us *[insert name and or brief description of the Goods]*, and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 2.20 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

Signed: *[insert signature(s) of authorized representative(s) of the Manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the Manufacturer]*

Title: *[insert title]*

Duly authorized to sign this Authorization on behalf of: *[insert complete name of Bidder]*

Dated on _____ day of _____, _____ *[insert date of signing]*

PERFORMANCE STATEMENT FORMDetails of similar equipment / systems supplied & installed during past 3 years in India & Abroad

Name of the Firm _____

Order Placed by (full address of Purchaser)	Order No. and date	Description and quantity of ordered equipment	Value of order	Date of completion of deliver as per contract	Date of actual completion of delivery	Remarks indicating reasons for late delivery, if any	Has the equipment been installed/ working satisfactory? (Attach a certificate from the purchaser / Consignee)	Name of Contact person along with Telephone No., Fax No. and e-mail address

Signature and Seal of the manufacturer/Bidder

Place :

Date :

SERVICE SUPPORT DETAIL FORM

Sr. No.	List of similar type of equipments serviced in the past 3 years	Address, Telephone Nos., Fax No. and e-mail address of the buyer	Nature of training Imparted/ service provided	Name and address of service provider

Signature and Seal of the manufacturer/Bidder.....

Place :

Date :

Eligibility Certificate

This is to certify that we are not associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Purchaser to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation of Bids / Tender No. _____ dated _____.

Authorised Signatory

Name: _____

Designation: _____

Non-Black listing Self Certificate

This is to certify that M/s. _____ has not been blacklisted by any Central / State Government Department / organization in last 3 years.

Authorised Signatory

Name: _____

Designation: _____

No Relation Certificate

I..... son of resident of hereby certify that none of my relative (s) called for providing Services to the CSIR-NAL, vide Tender No:is / are employed in CSIR-National Aerospace Laboratories, Bengaluru. In case at any stage, it is found that the information given by me is false / incorrect, CSIR-NAL shall have the absolute right to take any action as deemed fit / without any prior intimation to me.

Signed.....

For and on behalf of the Bidder

Name

Designation

Date.....

DEVIATION STATEMENT FORM

PART -I

The following are the particulars of deviations from the requirements of the tender specifications:

CLAUSE	DEVIATION	REMARKS (INCLUDING JUSTIFICATION)

Place:

Date:

Signature and seal of the
Manufacturer/Bidder

NOTE:

Where there is no deviation, the statement should be returned duly signed with an endorsement indicating "No Deviations".

PART – II

(Refer Clause 1.25 of Tender Document, Chapter-7 & Chapter-8)

Sr. No.	Tender Clause No.	Tender Requirement	Compliance	Document Submitted
1	1.17	Bid is Signed	Yes / No	Yes / NA
2	1.16	Bid Validity (90 days after the date of Bid opening)	Yes / No Bid valid up to	Yes / NA
3	1.15	Bid Security/Earnest Money Deposit	Yes / No	Yes / NA
4	Chapter-8, Annexure-B	Bidder Information Form	Yes / No	Yes / NA
5	Chapter-8, Annexure-C	Bid Form	Yes / No	Yes / NA
6	Chapter-8, Annexure-G	Eligibility Certificate	Yes / No	Yes / NA
7	Chapter-8, Annexure-H	Non-Black List Certificate	Yes / No	Yes / NA
8	Chapter-8, Annexure-I	No Relation Certificate	Yes / No	Yes / NA
9	Chapter-5, Clause No.5.1(a(iii))	Copy of Certificate of Incorporation	Yes / No	Yes / NA
10	Chapter-5, Clause No.5.1(b)	Copy of Agreement/Memorandum of Understanding	Yes / No	Yes / NA
11	Chapter-5, Clause No.5.2(a)	Manufacturer's Authorisation Form	Yes / No	Yes / NA
12	Chapter-5, Clause No.5.2(b)	List of Supply and Installation of the Equipment & Performance Statement Form	Yes / No	Yes / NA
13	Chapter-5, Clause No.5.2(c)	Service Support Detail Form	Yes / No	Yes / NA
14	Chapter-5, Clause No.5.3(a)	Audited Balance Sheet (Last three Financial Year)	Yes / No	Yes / NA
15	GCC 2.20.3 & as specified in SCC	Warranty	Yes / No	Yes / NA
16	Clause 2.12.1 & as specified in SCC	Agree to submit Performance Security 10% of PO Value	Yes / No	Yes / NA
17	Chapter-8, Annexure-L	Agree to submit Indemnity Bond	Yes / No	Yes / NA
18	Chapter-7	Original Equipment Manufacturer/ Authorised Indian Agent agree to submit Contract Agreement	Yes / No	Yes / NA

The Bidder should submit other documents such as fulfillment of financial qualification criteria, Schedule of Requirement (Chapter-3) and various forms as specified in Chapter-8.

PERFORMANCE SECURITY FORM

MODEL BANK GUARANTEE FORMAT FOR PERFORMANCE SECURITY

To,
.....

WHEREAS
(name and address of the supplier) (hereinafter called "the supplier") has undertaken, in pursuance of contract no. datedto supply (description of goods and services) (herein after called "the contract").

AND WHEREAS it has been stipulated by you in the said contract that the supplier shall furnish you with a bank guarantee by a scheduled commercial bank recognized by you for the sum specified therein as security for compliance with its obligations in accordance with the contract;

AND WHEREAS we have agreed to give the supplier such a bank guarantee;

NOW THEREFORE we hereby affirm that we are guarantors and responsible to you, on behalf of the supplier, up to a total of (amount of the guarantee in words and figures), and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of (amount of guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the supplier before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the supplier shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until the day of, 20.....

(Signature of the authorized officer of the Bank)

.....
Name and designation of the officer

.....
Seal, name & address of the Bank and address of the Branch

Note: Whenever, the bidder chooses to submit the Performance Security in the form of Bank Guarantee, then he should advise the banker issuing the Bank Guarantee to immediately send by Registered Post (A.D.) an unstamped duplicate copy of the Guarantee directly to the Purchaser with a covering letter to compare with the original BG for the correctness, genuineness, etc.

INDEMNITY BOND

No. _____

Date:_____

1) Amalgamation/Acquisition

In the event of M/s. _____proposes for amalgamation, acquisition or sale of its business to any other firm during this contract period, M/s._____ and proposed Buyer/Successor of the Principal Company are liable to execute, fulfill contractual obligations without any deviations. For this purpose M/s. _____/M/s._____ and proposed Buyer/Successor of the Principal Company shall indemnify itself to the Director, National Aerospace Laboratories, Bengaluru to fulfill the contractual obligations as per the terms of the CSIR-NAL Global Tender and quotation of M/s. _____No. _____ dated_____ and National Aerospace Laboratories P.O. No._____dated _____. The contractual obligations are supply, installation, commissioning, warranty maintenance/replacement of spares, accessories etc. as per the above mentioned Purchase Order.

2) JointVenture, Consortium or Association

If the Supplier is a joint venture, consortium, or association, all the parties shall be jointly and severally liable to the CSIR-NAL for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the CSIR-NAL.

3) Patent Indemnity

The Supplier shall, subject to CSIR-NAL’s compliance and indemnify and hold CSIR-NAL and its employees and officers harmless from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney’s fees and expenses, which CSIR-NAL may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of: (a) the installation of the Goods by the Supplier or the use of the Goods in India; and (b) the sale in any country of the products produced by the Goods.

For M/s._____
Principal Supplier.

For M/s _____
Indian Agent.

Acceptance Certificate

PO No.:			Dated:	
Sub: Certificate of Supply, Installation, Commissioning, Training and Acceptance of Goods & Services				
1	This is to certify that the equipment as detailed below has/have been received in good condition along with all the standard and special accessories (subject to remarks in Para 2). The same has been installed, commissioned and accepted.			
(a)	Contract No.			
	Date			
	Value			
(b)	Description of the Equipment			
(c)	Name of the Consignee			
(d)	Scheduled date of Delivery of the Consignment to the Laboratory/Institute			
(e)	Details of LC Established			
	Date of Establishment		Date of Shipment	Date of Expiry
(f)	Actual date of receipt of Consignment by the Laboratory/Institute			
	Date of Shipment		Date of Receipt at CSIR-NAL	
(g)	Scheduled date for completion of Installation, Commissioning and acceptance			
(h)	Actual date of completion of Installation, Commissioning and acceptance			
(i)	Penalty for Late Delivery (at Laboratory / Institute level) Rs.			
(j)	Penalty for Late Installation, Commissioning and Acceptance (at Laboratory / Institute level) Rs.			
2	Details of accessories/items not yet supplied and recoveries to be made on that account			
Sr. No.	Description		Amount to be recovered	
3	The acceptance test has been done to our entire satisfaction. The Supplier has fulfilled his contractual obligations satisfactory			
	OR			
	The Supplier has failed to fulfill his contractual obligations with regard to the following:			
Sr. No.	Description		Amount to be recovered	
The amount of recovery on account of failure of the supplier to meet his contractual obligations is as indicated at Para 3				

4	Liquidated Damages/Penalty Percentage				
	No. of Days / Weeks delayed		Amount to be recovered		
5	Warranty Details				
6	Training, if any				
7	Details of Performance Security submitted in the form of Bank Guarantee / Demand Draft				
	BG No.	Date	Amount in USD	Valid till	% of BG
For Purchaser (Indenting Officer)		For Purchaser (Project Leader)			
Signature		Signature			
Name		Name			
Designation		Designation			
Name of the Laboratory/Institute		CSIR-NAL		Name of the Laboratory/Institute	
Date				Date	
HOD					
Signature					
Name					
Designation					
Name of the Laboratory/Institute		CSIR-NAL			
Date					
For Supplier					
Signature					
Name					
Designation					
Name of the Firm					
Date					