

Sl No.	<b>COMMERCIAL TERMS AND CONDITION</b>	
1.0	Scope of supply	The scope of the supply is Design, fabricate, demonstrate main parameters/specifications at vendor's site, transportation to site, handle at site, integrate, test & demonstrate all sub system & total performance, test, install and commission a horizontally mounted Thermo vacuum chamber at ASOE, Vikram Sarabhai Space centre, ISRO Thiruvananthapuram on turnkey basis as per the attached technical specifications. Mutually agreed third party certification from BVQI/LLOYDS is required at design and all stages of fabrication from raw material identification till testing at pre delivery inspection stages.
2.0	Bidding process	Bidding process: The quote shall be presented in TWO parts namely, Techno – Commercial bid and Price bid. Each bid shall be separately sealed and clearly identified.
3.0	Techno-commercial Bid:	Techno-commercial Bid:
3.1	The techno-commercial bid details	The techno-commercial bid shall address each and every specification and shall specify values like chamber size, wall thickness, pump sizing, pump down time calculation, assumptions made, details of the thermal system especially with regard to its capacity, temperature uniformity accuracy, control, and major equipment specification etc. Also sources / makes of individual equipment / parts proposed shall be mentioned in the quote for evaluation of the quality aspects of the components used in the realization of the system as a whole.
3.2	Evaluation	Please note that the evaluation by the committee will be based on the inputs provided in the bid. Mere statement stating compliance to certain specification is not sufficient unless it is backed up by clear information, catalogs, and proof of achieving the parameters in earlier supplied items to various national as well as international customers. Bid is likely to be rejected if all necessary information is not provided.
3.3	Bid details	Bid shall contain the following:
3.3.1	Designs	The design methodology and specific details of calculations.
3.3.2	Schematic	Schematic of the proposed vacuum pumping system, thermal system, LN2 storage tanks & supply lines. Details shall be given including rating , make of each components / valves / sub systems.
3.3.3	Material & Standard	Materials used and the standards followed in design.
3.3.4	Previous experiences	Vendor shall have previous experience in realizing and supplying similar automatic thermo vacuum chambers along with its thermal system to ISRO/DRDO or other reputed firms.
3.3.5	Details of previous experience	Details of previous experience like, chamber size, type of thermal circulation system used, date of supply, Name, Address, e-mail & phone No. of customer, present working status, specification achieved in the supplied system, especially wrt. temperature uniformity, control accuracy and temperature range of thermal system.
3.3.6	List of essential spares	List of essential spares which are provided along with the chamber.

3.3.7	Details of schedule, milestones & Gantt chart	Vendor shall provide details of schedule, milestones & Gantt chart depicting all important stages and time required for each. Realistic time schedule alone shall be given as Liquidated damages will be recovered as per Government norms if the milestones are not achieved within agreed time frame.
4.0	Price Bid	Price bid: The price bid shall include
4.1	Cost Breakup of all major system	The cost breakup of all major sub systems viz, Chamber, pumping system, thermal conditioning system, thermal shroud & thermal plate, LN2 Dewar & SIV lines, transportation etc.
4.2	Cost breakup of essential spare	The cost breakup of the essential spare parts proposed for the trouble-free operation of the chamber for a period of 10 years (minimum). The quantity and price shall also be provided.
4.3	List & Cost of the item	List & Cost of the items sourced within India.
4.4	Price for complete system	Price for the complete system
4.5	AMC	Annual Maintenance Contract (AMC) charges for a period of 7 years after warranty period. This amount will also be taken into consideration for determining the lowest quote.
5.0	Duty Exemption certificate	For imported parts / systems procured, duty exemption certificates will be provided by ISRO.
6.0	Delivery Periods	The chamber shall be installed and commissioned by the supplier within 12 months from the date of placement of the purchase order.
7.0	Offer details	The offer shall be for the complete Design, fabrication, demonstration of main parameters / specifications at vendor's site, transportation to site, handling at site, integrating, testing & demonstrating all sub system & total performance, installation, final acceptance testing, and commissioning of the Thermo vacuum chamber. Mutually agreed third party certification from BVQI / LLOYDS is required at design and at all stages of fabrication from raw material identification till testing at pre delivery inspection stage. All equipment and consumables required (except for the exclusions stated in the scope of VSSC) will be in the scope of the supplier.
8.0	Layout diagram	Vendor shall provide a layout diagram of the proposed system showing major equipment with the minimum floor area / space required for installation along with the offer.
9.0	Supplied item manufacturing location	Vendor shall specify whether the supplied systems were (a) fully designed and manufactured at vendor's works, or (b) Integrated from outsourced subsystems, if so, provide details.
10.0	Documentary evidence	Vendor shall submit the documentary evidence from the concerned customers' for the satisfactory performance of the 1000 mm dia X 800 mm depth or higher capacity Thermovacuum chambers without any major breakdown over the past 5 years.

**Annexure-II**

11.0	Right to Visit	VSSC reserves the right to visit vendor's or his customers' premises where the systems have been supplied, for verification of the information provided by the vendor in the technical bid and other infrastructure facilities claimed. Incomplete technical bid of the vendor, which does not meet technical requirements mentioned in this tender is liable to be rejected.
12.0	Complete Offer of Total system	Offer shall be for the total system and incomplete/ partial offers will not be considered.
13.0	Technical Presentation	Vendor shall be ready to give a technical presentation to the Technical Committee formed for the purpose of finalizing the procurement at VSSC Thiruvananthapuram. The vendor shall be intimated 15 days in advance for this presentation. This intimation will be sent to the vendor only after the technical evaluation of the proposal and examining its technical suitability.
14.0	14.0 Details of consumables	Vendor shall provide the details of the consumables, such as liquid nitrogen, helium gas required to demonstrate the performance of the chamber at VSSC, Thiruvananthapuram at the time of installation and commissioning.
15.0	Service centre	Vendor shall have Service Centre in India for pre/post guarantee/warranty service back up. Vendor shall submit detailed list of Service Centre/s.
16.0	Acceptance Test Plan & schedule	Vendor shall give full details of his proposed Acceptance Test Plan & schedule of activities: 1.0 At vendor's site and 2.0 At VSSC site, Thiruvananthapuram
17.0	Third party inspection	Vendor shall confirm compliance to all the specifications witnessed by mutually agreed Third Party Inspection Agency (TPIA) and the inspection / tests reports thus generated and vouched by TPIA shall be provided to VSSC well in advance for scrutiny before proceeding for witnessing tests at vendor's site.
18.0	Pre-dispatch inspection	Pre-dispatch inspection shall be carried out by VSSC Engineers at vendor's site. As part of pre-dispatch acceptance, Vendor shall carry out and demonstrate salient specifications as per Factory Acceptance Test Plan in presence of VSSC Engineers at their works/site.
19.0	Vendor responsibilities detail	Details as follows
19.1	Safe transportation	Safe transportation of total system; warehouse to warehouse insurance to be provided by vendor .
19.2	Supervise unloading and handling	Supervise unloading and handling of the system at VSSC site, Thiruvananthapuram.
19.3	Installation and commissioning	Installation and commissioning of total system at VSSC site at Thiruvananthapuram adhering to all safety regulations.
19.4	Demonstration of total performance	Demonstration of total performance specifications of the integrated system including vacuum chambers, thermal system and other associated system supplied.
20.0	Training	Vendor shall impart detailed training for operation, trouble shooting and maintenance of the system to Engineers & Technicians at VSSC, Thiruvananthapuram at no extra cost.

21.0	Guarantee	All the equipment offered by the vendor shall have free guarantee support of at least one year from the date of installation and acceptance of total system at VSSC, Thiruvananthapuram.
22.0	Technical catalogue, Literature & Data sheet	Vendor shall attach technical catalogs, literature and detailed data sheets of all items offered by the vendor in support of their technical offer.
23.0	Installation, operation and maintenance documentation	Installation, operation and maintenance manuals of all systems shall be supplied with the system. CAD drawings and circuit diagrams relevant to maintenance shall also be included.
24.0	Delivery Period	Vendor shall deliver and commission the Thermovacuum system at VSSC meeting the abovementioned specifications and interface requirements within a period of twelve months from the date of release of purchase order.
25.0	Approval	Prior approval of fabrication drawing: The vendor shall have to submit the fabrication drawing for the vacuum chamber and thermal system and shall get prior approval from VSSC before starting the fabrication works.
26.0	Warranty	Warranty: The supplier shall provide a performance warranty of minimum 3 years, from the date of installation, commissioning and acceptance at VSSC, for the entire system against any failure or any failure in meeting the overall performance specifications of the system.
27.0	Maintenance	All maintenance related issues shall be addressed within 3 days from the date of intimation from VSSC.
28.0	Online support	There shall be provision for carrying out diagnostics remotely through VPN.
29.0	QA/QC Plan	Necessary QA / QC plan shall be prepared by the vendor and the same shall be approved before start of fabrication.
30.0	Inspection and Factory Acceptance Test Plan	A detailed quality control plan shall be drawn up by the vendor at the design stage itself and shall consists of:
30.1	Demonstration of Chamber leak tightness	Demonstration of Chamber leak tightness
30.2	Demonstration	Six thermal cycles as per the system qualification test profile at extreme temperature levels shall be performed on a dummy test article of rated mass and heat dissipation and the results shall comply with the performance specifications provided.
30.3	Demonstration of leak tightness	Demonstration of leak tightness on the already proof pressure tested (witnessed by TPIA) thermal shroud & thermal plate after ensuring that it is subjected to a minimum of three cycles of thermal cycling.
30.4	Demonstration the performance of total system	Provision shall be available at supplier's site for repeated cooling & heating of thermal shroud and demonstrating the performance of the total system
31.0	Inspection & Acceptance Test Plan	Inspection and VSSC Site Acceptance Test Plan shall contain:
31.1	Chamber Leak Tightness	Demonstration of Chamber leak tightness

31.2	Thermal shroud & thermal plate leak tightness	Demonstration of thermal shroud & thermal plate leak tightness after ensuring that it is subjected to a minimum of three cycles of thermal cycling.
31.3	Demonstration of all specifications & performance	Demonstration of all specifications & performance shall be done during site acceptance test for a typical full duration test profile as given in figure 2 in specification document.
31.4	Functioning of all interlocks	Functioning of all interlocks shall be demonstrated.
31.5	Safe shut down	Safe shut down & revival in the event of electrical power failure shall be demonstrated.
31.6	Safety alarms	All Safety alarms & its acknowledgment shall be demonstrated.
31.7	Software re-installation	Software re-installation shall be demonstrated (if is transported to VSSC in Pre-installed condition). Necessary passwords shall be given to VSSC during commissioning of the facility.
32.0	Liquidated Damages (LD)	Liquidated Damages (LD): LD shall be levied beyond the date of delivery mentioned in this order @ 0.5% per week or part thereof on the undelivered portion subject to a maximum of 10% of the contract value.
33.0	Security Deposit	Security Deposit: Upon receipt of this order, you shall submit a Bank Guarantee towards Security Deposit within 2 weeks along with your order acknowledgement, equivalent to 10% of the order value in Rs.200/- NJ Stamp Paper (as per format attached). This shall be valid up to a period of 60 days from the date of supply and shall be returned upon completion of all contractual obligations.

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