

# REQUEST FOR PROPOSAL

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OUTSOURCING OF ASSEMBLY & TESTING OF  
FLUID CONTROL COMPONENTS & MODULES  
(FCCM) THROUGH SERVICE PROVIDER.

## **1 INTRODUCTION**

Control Systems & Components (CSC) Entity of LPSC, Valiamala has an aerospace standard assembly and test facility for Assembly & Testing (A&T) of aerospace grade Fluid Control Components (valves, regulators, etc.) & Modules. This A&T facility which is available at LPSC, Valiamala is being utilized for the assembly and testing of Fluid Control Components & Modules by a SERVICE PROVIDER as per requirements of LPSC. The Contract period is two years and extendable by another one more year based on satisfactory completion and mutual consent at the end of second year, after review and Department approval.

## **2.0 SCOPE OF WORK**

Service provider will be required to carry out tasks related to Assembly and Testing of Fluid Control Components and Modules (FCCM) in Cryo clean rooms for a period of two years.

## **3.0 ASSEMBLY AND TEST RELATED ACTIVITIES**

**Various types of fluid control components for assembly & testing are given below.**

- Check valve
- Pneumatically operated valve
- Electro pneumatic valve
- Filter assembly
- Motor operated valve
- Regulator
- Relief valve
- Solenoid valve

**Service provider has to carryout following activities for fluid control components listed above.**

**3.1 Part Preparation** – Collection of parts from bonded stores, Collection of dimensional reports and its review, De-burring of parts, preparation of inspection requests, Collection of standard parts from bonded stores. Cleaning of parts for pre-assembly, Assembly of fixtures for proof pressure test and collection of proof pressure test result and their compilation, Examination of parts under microscope before final clearance for assembly.

**3.2 Pre-assembly operations** – Pre-assembly operations to check critical clearances and assembly corrections required. Preparation of assembly correction requests, handing over parts to machining shop and collecting them back with reports. Scrutiny of FCD inspection reports, Re-verification of sliding clearances and comparing them with FCD acceptance criteria.

- 3.3 Realization of sub-assembly** – Cleaning of parts in ultrasonic cleaner, Assembly of parts for sub-assembly realization, welding request generation, collecting parts after welding, Carrying out leak check with Helium mass spectrometer.
- 3.4 Realization of final assembly** – Assembly part list preparation. Cleaning of parts, Assembly of components by assembling fasteners and then leak checking it with nitrogen/helium gas to check leak tightness in various joints. Filling of delta documents for assembly and testing.
- 3.5 Testing-** Preparation of test article for vibration testing, low temperature flow tests/leak checks, thermal testing, interface leak checks. Collection of test reports from the respective facilities. Carrying out necessary tests and consolidation of the results.
- 3.6 Preparation of test reports** –Preparation of test reports compiling all the assembly and test data for each component. Generation of graphs for various tests like flow test, response tests etc. Compilation of test result database.
- Any other activity related to assembly and testing that may be called for from time to time as may be felt necessary by LPSC.**

#### **4 LPSC RESPONSIBILITIES**

- 4.1** LPSC shall be associated with service provider to carry out activities related to assembly and testing.
- 4.2** LPSC shall provide necessary drawings, data, procedure, standards, log books, registers, forms etc.
- 4.3** LPSC shall be responsible for clarifying queries raised by service provider.

#### **5 SERVICE PROVIDER'S RESPONSIBILITY**

##### **5.1 Statutory Rules and Regulations:**

**A.** Keeping in view of liability under Employees Compensation Act, 1923, in case of the occurrence of any Accident during the course of execution of the Purchase Order involving any of the persons engaged by the Service provider occupied within the premises of the work site specified by LPSC and during the discharge of duties, resulting in:

- (i)** Death or permanent disability from loss of both limbs (or)
- (ii)** In the event of other permanent disability,

The victim/dependent shall be eligible for a compensation of Rs. 10 lakhs and Rs. 7 lakhs for (i) & (ii) respectively. This compensation is applicable irrespective of whether or not there has been any wrongful act, neglect or default and notwithstanding anything contained in any other law. The liability for this shall rest

with the Service provider concerned. Whenever such incident occurs, as per the guidelines of the Department, Department shall make arrangements for disbursing this amount and shall recover the same from the Service provider concerned. For this purpose, without limiting any of the other obligations or liabilities, the Service provider shall at his own expense take a comprehensive insurance for his workforce and for all the work during the execution period from any of the Insurance companies as approved by the Insurance Regulatory & Development Authority of India (IRDA). The Service provider shall have to furnish originals along with premium receipts and other papers related thereto the Officer concerned at LPSC within 15 days from the date of placement of the Purchase order and work shall commence only thereafter.

- B.** The Service Provider shall be responsible for compliance of all statutory provisions relating to Contract Labour (Regulation & Abolitions) Act, 1970 and Central Rules, 1971, Employees Provident Fund and Miscellaneous Provision Act 1952, Employees State Insurance Act, 1948 and Workmen's Compensation Act, 1923 in respect of the staff (including supervisors) of the Service Provider and shall pay the minimum wages fixed by Ministry of Labour and Employment, Government of India or wages fixed by Government of Kerala, whichever is higher as the case may be to the workers deployed, as per law of land including labour and other laws/acts.
- C.** In case, the Service Provider fails to comply with any statutory/taxation liability under appropriate law, and as a result thereof, if LPSC is put into any loss/obligation, monetary or otherwise, LPSC shall have the rights to recover such liability from the Service Provider.
- D.** Department will not pay any compensation for whatever cause arising during the period of contract or subsequently. However, the persons engaged by Service Provider shall scrupulously follow necessary safety precaution while performing the duty. The Service Provider shall arrange sufficient GROUP INSURANCE/PERSONAL ACCIDENT INSURANCE to cover any claim arising out at the time of discharging the contracted scope of work or for any damages / losses caused to the personnel while performing the duty. In the event of damages to LPSC property or injury to LPSC's / Service Provider's personnel due to the negligence of Service Provider's employees, the responsibility shall solely rest with

the Service Provider. LPSC shall not be responsible for loss of life of the Service Provider's workers due to accidents/natural calamities/ explosives etc. Department of Space/ISRO shall not be compensated to persons for accident/ injuries/death while on work.

- 5.2 The Service Provider shall identify a focal point (engineer) who shall be the single point of contact for the Department for day to day execution of the contract.
- 5.3 The SERVICE PROVIDER should provide minimum workforce (indicated in this RFP in terms of man-hours) for Assembly & Testing within the given period.
- 5.4 Salary: Appropriate market based salaries matching to experience and skill shall be given to prevent attrition. Attrition shall be prevented since this precision job involves familiarizing the critical assembly & testing procedures to the Service Provider's personnel from LPSC side and due to security reasons. Salaries shall be directly credited by the SERVICE PROVIDER to bank a/c of SERVICE PROVIDER employees, before 7<sup>th</sup> of every month.

## **6 JOINT REVIEW TEAM ( JRT)**

A Joint Review Team (JRT) shall be formed by LPSC (with representatives from LPSC & SERVICE PROVIDER) to finalize nominal monthly man-hour requirement for the forthcoming month, clearing the bills submitted by the service provider, review the progress etc.

## **7 RIGHTS OF THE DEPARTMENT (LPSC)**

- 7.1 The Department reserves the right to seek replacement of any of the SERVICE PROVIDER's employee, if found unfit at any stage.
- 7.2 The Department reserves the right at any time to make minor modifications which is not expected to have any financial impact in the qualitative requirements, specifications, patterns or drawings, testing etc.
- 7.3 LPSC shall have the right to assess and oversee the service provider's personnel performing activities.

## **8 MAN-HOUR REQUIREMENT**

- 8.1 The SERVICE PROVIDER should provide all the required workforce (indicated in this RFP) for the scope of work detailed in sections 2 & 3.
- 8.2 Following is the annual man-hours requirement to be positioned by the SERVICE PROVIDER for Assembly & Testing of Fluid control components & modules.

**Table - 1**

Sl. No.	Work Description	Graduate Engineer man-hour per year	Technical Assistant man-hour per year	Technician man-hour per year	Data entry operator man-hour per year	Helper man-hour per year
1.	Assembly and testing of fluid control components & modules.	4800 (M)	16800(M) + 2400(E/EI)	52800 (M) + 2400 (E)	2400	2400
<b>Grand Total Man hour</b>		<b>4800</b>	<b>19200</b>	<b>55200</b>	<b>2400</b>	<b>2400</b>

(E) - Electronics; (M) – Mechanical; (EI) – Electrical.

Total man-hour requirement for each category is given below.

Sl. No	Category	Annual man- hour requirement	Man-hour required for two years
1.	Graduate Engineer	4800	<b>9600</b>
2.	Technical Assistant	19200	<b>38400</b>
3.	ITI Technician	55200	<b>110400</b>
4.	Data Entry Operator	2400	<b>4800</b>
5.	Helper	2400	<b>4800</b>

**NOTE:** Normal working hours: 8.45hrs to 17.15hrs (8hrs working with half an hour lunch break) (Monday to Saturday).

- Depending on exigencies, working beyond the above working hours is expected on certain days. However, the total annual man-hour shall not vary more than  $\pm 10\%$  of the man-hours per year as indicated in Table -1.
- Nominal monthly man hour requirement will be worked out and intimated by the LPSC focal point to the SERVICE PROVIDER's focal point. This will be the subset of annual man hour envisaged. Monthly man-hour may vary depending on extra hours/ due to absentee. In case of emergency requirement, the extra man hour requirement will be intimated to the SERVICE PROVIDER's focal point.

### **Qualification criteria:**

Graduate Engineer	- B.E/B.Tech in Engineering (Mechanical)
Technical Assistant	- Diploma in Engineering (Mechanical) & Diploma in Engineering ( Electrical/ Electronics)
ITI Technician	- ITI (Fitter/Turner) & ITI (Electrician) for winding activity.
Data Entry operator	- Graduate in B.Com/Bsc (Proficiency in MS-Office & Windows operating system).
Helper	- Pass in upper primary level.

Since, the nature of job in precise assembly and testing of fluid control components require skill and experience; SERVICE PROVIDER shall position the requested workforce w.r.t. Graduate Engineer category, Technical assistant category, & ITI Technician category with minimum of 1 year experience in assembly and testing area.

## **9 PAYMENT TERMS**

**9.1** Payment shall be made once in a month based on the certification by LPSC focal Point with the approval of JRT. **The payment will be made based on the actual man-hour engaged in that particular month.** All payments shall be made through e-payment mode only & SERVICE PROVIDER will have to provide the relevant details to facilitate this.

## **10 ESSENTIAL CRITERIA FOR SCRUTINY OF PROPOSALS**

### **10.1 General**

**10.1.1.** The quote shall contain information about the company, financial standing and line of business.

**10.1.2.** Documentary evidences shall be furnished for supporting the stated facts.

### **10.2 Criteria for scrutiny and evaluation of parties**

**10.2.1.** The companies desirous of submitting proposals shall mandatorily be accredited with AS 9100/ ISO 9001:2015 or equivalent standard for the last 3 years for the company's existing operations.

**10.2.2.** Prior experience of more than 1 year is mandatory in manufacturing/ assembly/ production of similar mechanical aerospace products like fluid control components, actuators in their own company/ manufacturing plant.

**10.2.3.** The service provider shall possess human resource with adequate knowledge, skill and experience in the areas of assembly and testing.

**10.2.4.** Annual turnover of the company should be greater than Rs.50 Lakhs for each of the last 2 financial years.

- 10.2.5.** Certified copies of Annual financial turnover and balance sheets showing profit / loss for the last 2 years shall be furnished.
- 10.2.7.** Company shall have atleast Class 1,00,000 clean-rooms.
- 10.2.8.** Company shall provide organization structure and details of human resource available with the company.
- 10.2.9** Companies shall be familiar with Aerospace/ ISO Quality System Requirements.
- Note:** For clauses 10.2.1 to 10.2.9, the information provided by the companies shall be backed by documentary evidences.
- 10.3. Company shall provide compliance statement for each section similar to template given in Annexure 1.**

**11 PRE-BID MEETING**

A pre-bid meeting is scheduled to be held on 18<sup>th</sup> February 2020 at LPSC Valiamala at 11:00 AM by inviting the parties who are interested to participate in the two-part tender for giving them an overall idea about the activities involved in **Assembly & Testing of components**. This is to enable the parties to understand the complexity of Assembly & Testing activities/processes thoroughly before submitting their price bid. **Bidders interested to participate in the pre-bid meeting may register their name before 5:00PM of 17<sup>th</sup> February 2020 by sending email to [ps0\\_3@lpsc.gov.in](mailto:ps0_3@lpsc.gov.in) or [spso\\_purchase@lpsc.gov.in](mailto:spso_purchase@lpsc.gov.in). Please note that the bids from the parties who do not participate in the Pre-bid meeting will be summarily rejected.**

**12 How to quote? Quotation template**

Man-hour rate for Assembly & Testing of components and modules shall be given as quote as given below.

Sl. No.	Category	Annual man-hour requirement	Man-hour requirement for two years	All inclusive (excluding GST) Hourly rate (Rs.)*	Applicable GST rate (%)
1	Graduate Engineer	4800	<b>9600</b>		
2	Technical Assistant	19200	<b>38400</b>		
3	ITI Technician	55200	<b>110400</b>		
4	Data Entry Operator	2400	<b>4800</b>		
5	Helper	2400	<b>4800</b>		



\* The hourly rate shall be firm and fixed for a period of two years and include all aspects including mandatory payments as per all social security & other statutory requirements etc. GST applicable will be paid by LPSC. No other charges shall be payable by LPSC.

### **13 PERIOD OF CONTRACT**

- 13.1** Period of contract is for two years from the date of start of executing the contract. The start of execution of contract shall not exceed one month from the date of signing of contract.
- 13.2** At the end of second year, based on satisfactory performance and mutual consent, the contract shall be extended for one more year based on the review at the end of 2<sup>nd</sup> year and with the approval of Department.

### **14 GENERAL TERMS AND CONDITIONS**

- 14.1** The SERVICE PROVIDER shall ensure strict compliance with the provisions of the applicable Central/State Laws.
- 14.2** The personnel should be stationed only in areas identified for their work and shall not enter other areas without appropriate permission from the Department.
- 14.3** All manpower deployed should be the employees of the SERVICE PROVIDER.
- 14.4** The SERVICE PROVIDER should follow all the LPSC security instructions applicable for people & processes prevailing at present and those issued from time to time.
- 14.5** The SERVICE PROVIDER must ensure that the personnel deployed are all Indian citizens only, character & antecedents of whom are duly verified by the Police. The police verification certificate should be submitted to LPSC.
- 14.6 SAFETY:** Testing activities involves high pressure operations and the facilities are provided with sufficient safety features and equipments. All personnel engaged in high pressure activities are given appropriate briefing/instructions on maintaining personal safety and the same will be extended to the Service Provider's personnel. They shall strictly adhere to the instructions and the responsibilities to ensure this compliance rest entirely with the Service Provider. SERVICE PROVIDER shall ensure that other general safety precautions as laid down by Department shall also be strictly adhered. Due to the non-compliance of safety guidelines, any loss/damage/injury occurring to the personnel engaged/facilities shall be the responsibility of Service Provider for compensation, if any.
- 14.7 WASTE DISPOSAL:** The SERVICE PROVIDER shall transfer the waste products/materials generated during the process to a location identified by LPSC within the LPSC campus. LPSC shall organize further safe disposal of waste products

- 14.8** All facilities and utilities entrusted to the SERVICE PROVIDER should be handled with due care and caution and any liability whatsoever in nature due to mishandling or otherwise would be borne by the SERVICE PROVIDER. It is also agreed by and between the parties that in any case, any liability arises, neither LPSC/Government nor the representative of LPSC/Government will be responsible for the same. In case it is assessed by the Govt. committee that the damages have been caused due to intentional mishandling by the SERVICE PROVIDER, the SERVICE PROVIDER will be liable to pay the entire damages to LPSC/Government.
- 14.9** In case of exigencies inside the campus, first aid as available will be provided during the normal working hours. For further medical treatment and for any other emergencies beyond the working hours, the SERVICE PROVIDER shall make its own arrangement.
- 14.10 Transport:** Transport 'To Valiamala or any other work spot' and 'From Valiamala or any other work spot' is SERVICE PROVIDER's scope. LPSC transport facility will not be available for employees of SERVICE PROVIDER.
- 14.11** Department **canteen facilities** available in the campus can be extended to the service provider's personnel if required at the rates fixed by department from time to time as applicable to such personnel.
- 14.12** All the employees shall be provided with neat uniform, appropriate footwear by the service provider. All the employees shall compulsorily wear the uniform on all working days. Soiled & torn uniform shall not be worn.
- 14.13** Identification cards (ID Cards) shall be provided by the SERVICE PROVIDER for all the employees positioned by it and the same shall be appropriately displayed by the personnel while they are in the campus.

**15 SECURITY DEPOSIT-CUM-PERFORMANCE BANK GUARANTEE:**

Immediately on receipt of the purchase order, an interest free amount equivalent to 10% of the Order Value apportioned for one year shall be submitted by Service Provider towards SD-cum-PBG in the form of Bank Guarantee issued from a Nationalized Bank in Rs.200/- Non-judicial Stamp paper valid for a period of 15 months. This interest free SD-cum-PBG shall be returned to the Service Provider on successful completion of all contractual obligations or shall be adjusted/ forfeited against non-fulfillment of any of the contractual obligations.

**16 LIQUIDATED DAMAGES:**

If the Service Provider fails to deploy the requested monthly man-hour requirement as per the Purchase order, LPSC shall recover from the Service Provider as liquidated damages a sum of 0.5 % per week of the cost of man-hour not deployed. However, the total

liquidated damages recovered shall not exceed ten percent (10%) of the value for the non-deployed man-hour.

## **17 FORCE MAJEURE**

Neither party shall bear responsibility for the complete or partial non-performance of any of his obligations (except for failure to pay any sum which has become due on account of receipt of goods under the provisions of the present Purchase Order/Contract) if the non-performance results from such *force majeure* circumstances such as, but not restricted to, flood, fire, earthquake, civil, commotion, sabotage, explosion, epidemic, quarantine restriction, strike, lock-out, freight embargo, acts of the Government either in its sovereign or Contractual capacity, hostility, acts of public enemy and acts of God as well as war or revolution, military operation, blockade, acts or actions of State authorities or any other circumstance beyond the control of the parties that have arisen after the conclusion of the present Purchase Order/Contract.

## **18 SECURITY & PATENT RIGHTS**

- 18.1** The documents/drawings/process sheet/data of the results are strictly confidential and the Service Provider or his employees shall not divulge any information that is made known to him or he has come across, to any person not authorized to receive such information.
- 18.2** The Service Provider or his employees shall not take any document/process sheet/data of the results/CD/USB, etc containing work details outside the place of work.
- 18.3** Any violation of secrecy, detected at any time of the Contract, by the Service Provider or any of his employees may lead to termination of services of the employee/Contract itself as deemed fit by Department. This will also attract serious action.
- 18.4** The designs, process etc. whether or not protected by patent, are to be strictly treated as secret & the Service Provider shall not disclose any details of the above to any unauthorized person or to any other party not directly linked with LPSC and shall not use the same for any other purpose.
- 18.5** In case of a contract/ work order, the entire contract and all activities covered under the same shall be treated as confidential and no part of it shall be divulged to any third party without the prior written consent of the Department.

## **19 GRIEVANCE REDRESSAL AND ARBITRATIONS**

- 19.1** The provisions relating to grievance redressal mechanism, including the details of the authority to which a contractor/supplier may submit an application for review of any decision or action taken by the Department, shall be incorporated in the Contract.

**19.2** In the event of any dispute or difference arising out of or in connection with any of the terms and conditions of this Purchase Order/Contract, such dispute or difference shall be settled amicably by mutual consultations or through the good offices of the respective parties. If such resolution is not possible, then the unresolved dispute or difference shall be referred to the sole arbitrator appointed by Director-LPSC, in accordance with the rules and procedures of the Arbitration and Conciliation Act of 1996 or any re-enactment or modification/ alteration thereof. The decision of the Arbitrator shall be final and binding upon the parties and the expenses for the arbitration shall be borne by the respective parties unless otherwise determined by the Arbitrator. The Arbitrator may, with the consent of both the parties, extend the time for making the Award. The Arbitration shall be held at Thiruvananthapuram, Kerala.

## **20 TRANSFER OR SUBLETTING OF CONTRACT**

The Service Provider shall not sublet the work under the contract either in whole or in part for the fulfillment of the contractual obligations vested with them.

## **21 SHORT CLOSING/ TERMINATION OF THE CONTRACT**

- 21.1** In case of failure on the part of SERVICE PROVIDER for commencing within a period of one month from the date of signing of the contract, Department reserves the right to terminate the contract and Service Provider shall forfeit the security deposit in total.
- 21.2** In case of non performance of the Service Provider in fulfillment of the contract obligations vested with them, Department reserves the right to terminate the contract and notify the SERVICE PROVIDER accordingly. In such case also, the SERVICE PROVIDER shall forfeit the security deposit in total. On receipt of short closing/termination notice the SERVICE PROVIDER shall take all necessary steps for winding up of the contract in line with the notice within a reasonable period but in any case not later than one month from the date of posting this notice.
- 21.3** If any of the workforces of the SERVICE PROVIDER misbehaves or commits any misconduct, LPSC reserves the right to refuse permission to such persons to enter LPSC. Any violation in this regard shall result in the termination of the Contract without any notice.
- 21.4** In case of major changes in the policies of the Government of India, as a result of which the Department is compelled to curtail the requirements wholly or partly, Department and the SERVICE PROVIDER shall enter into negotiation to mutually agree to terminate this contract wholly or partly. The compensation if any, to be paid to the SERVICE PROVIDER shall be agreed to by the mutual negotiations and in no case when added together with

payments already made or has become payable under the contract shall exceed the total order value.

**22 APPLICABLE LAW**

This contract shall be governed by and interpreted and construed in accordance with the Rule of Law in India. The Department shall not be responsible and shall be totally absolved if the Service Provider infringes the laws or statutes in force during the currency of the contract.

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**COMPLIANCE MATRIX TO “REQUEST FOR PROPOSAL” for Outsourcing of Assembly & Testing of Fluid Control Components & Modules (FCCM) through Service Provider in Cryo Cleanroom Facility in LPSC, Valiamala”**

SL.NO.	SPECIFICATION/ TERMS & CONDITIONS	COMPLIES (Yes/No)	REMARKS
1.	Scope of work as per clause no.2.0		
2.	Assembly & Test related activities as per clause no. 3.0 (ie, from 3.1 to 3.6)		
3.	Service Provider’s responsibility as per clause no.5. (ie, clause no. from 5.1 to 5.4).		
4.	Rights of the Department as per clause no. 7 (ie, clause no. from 7.1 to 7.3).		
5.	Work description, man-hour requirement, qualification criteria and experience as per clause no 8.		
6.	Payment terms as per clause no. 9		
7.	Essential criteria for scrutiny of proposals as per clause no.10 (ie, clause no. from 10.1 to 10.3)		
8.	Quotation template as per clause no.12.		
9.	Period of contract as per clause no.13.		
10.	General terms & conditions as per clause no.14 (ie, clause no. from 14.1 to 14.13).		
11.	Security deposit as per clause no. 15.		
12.	Liquidated damages as per clause no. 16.		
13.	Force majeure as per clause no. 17.		
14.	Secrecy & Patent Rights as per clause no.18 (ie, clause no. from 18.1 to 18.5).		
15.	Grievance redressal & arbitrations as per clause no.19 (ie, clause no. from 19.1 to 19.2).		
16.	Transfer or subletting of contract as per clause no. 20.		
17.	Short closing/ Termination of the contract as per clause no.21. (ie, clause no. from 21.1 to 21.4).		
18.	Applicable law as per clause no.22.		