प्रायोगिक सूक्ष्मतरंग इलेक्ट्रॉनिकी इंजीनियरी एवं अनुसंधान संस्था (समीर)
(अनुसंधान तथा विकास प्रयोगशाला, इलेक्ट्रॉनिकी और सूचना प्रौद्योगिकी मंत्रालय, भारत सरकार)
Society for Applied Microwave Electronics Engineering and Research (SAMEER)
(R & D Lab of Ministry of Electronics and Information Technology, Government of India)

ENQUIRY

Hello : 022-25727221
E-mail : purchase@sameer.gov.in
FAX : 91-22-5723254

Ref : SMR/LMTD/CN225/2027L
DATE : 10/11/2026

Tender No. : LMTD/CN225/2027L
Tender due on : 01/12/2026

Dear Sir,

SAMEER invites sealed tenders for supply of material as given below.

Sr.No.	Description	Quantity	
	DEVELOPMENT OF CUSTOM BUILT 10 TR WATER CHILLER		
1)	Manufacture, Supply, Installation and Commissioning of 10 TR Outdoor Quality Packaged Water Chiller	1	Nos
2)	Development of Software for Chiller	1	Nos
3)	150 Meter Communication and 6 core Cable	1	Nos
4)	3 Years AMC after Warranty (optional)	1	Nos

Detailed specifications and ATC as per the attached tender document.

Note : 1) Delivery at SAMEER, Navi Mumbai-400614.
2) Pre-Bid Meeting: Date: November 16, 2026 **Time:** 11:00 AM
Venue: SAMEER, IIT Campus, Hill Side, Powai, Mumbai-400076

Shri. Mithun Nandan
Purchase & Stores Officer

THE QUOTATION MUST BE SUPERSCRIBED WITH OUR REFERENCE NUMBER AND DATE AND MUST BE ADDRESSED TO THE SIGNATORY

NOTE:1. Purchase Preference (Preference to make in India) : Please refer (https://www.sameer.gov.in/tenders.asp#page) . certification for local content must be submitted by the prospective bidders strictly on their letterhead.

2. Any bidder from a country which shares a land border with India will be elligible to bid in any procurement whether of goods, services or works only if they are registered with Department of promotion of Industry and Internal Trade (DPIIT). A Valid registration certificate should be attached.
Please refer OM No. F.No6/18/2019-PPD dated 23/07/2020 issued by Public Procurement Division, Ministry of Finance, GOI.

3. In case of "NO BID" or "REGRET" offer, the same should be indicated on the envelope along with tender number & due date.

Terms & Conditions are overleaf

T E N D E R D O C U M E N T

(Two Bids System)

Sub.: Development of custom built 10 TR Water Chiller with GUI

Qty: 1 No.

TENDER NO. : SMR/LMTD/CN225/2027L/LT

DUE ON : 01/12/2026

SAMEER

प्रायोगिक सूक्ष्मतरंग इलेक्ट्रॉनिकी इंजीनियरी तथा अनुसंधान संस्था
SOCIETY FOR APPLIED MICROWAVE ELECTRONICS ENGINEERING & RESEARCH
आई आई टी कैंपस, पवई, मुंबई 400076. फोन : 022 25723030/7221 फैक्स : 022 25723254
IIT CAMPUS, POWAI, MUMBAI 400 076. TEL. : 022-25723030/7221, Fax : 022 25723254
WEB SITE : www.sameer.gov.in E-mail : purchase@sameer.gov.in

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SECTION – I

INSTRUCTIONS FOR SUBMITTING THE OFFER

1. Tender is to be submitted in **two separate sealed covers, superscribed as `Technical Bid' and `Price Bid'** respectively and both these sealed covers are to be put in a bigger cover which should also be sealed and duly superscribed. Tender should address to **'The Purchase Officer / Head of the Division, SAMEER, IIT Campus, Powai, Mumbai 400 076'**. Tender reference including 'Due Date' should be clearly mentioned on all covers. Name and Address of the vendor should be mentioned at back side of all covers.

2. Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services or works only if they are registered with the Registration Committee, constituted by the Department of Promotion of Industry and Internal Trade (DPIIT). A valid registration certificate is to be attached. "Bidder from a country which shares a land border with India" means: -

a. An entity incorporated, established or registered in such a country; or
b. A subsidiary of an entity incorporated, established or registered in such a country; or
c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
d. An entity whose beneficial owner is situated in such a country; or
e. An Indian (or other) agent of such an entity; or
f. A natural person who is a citizen of such a country; or
g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.

The Successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India, unless such contractor is registered with the Registration Committee, constituted by the DPIIT.

3. Purchase Preference (Preference to make in India) : As prescribed in "Public Procurement (Preference to Make in India) order 2017 of GOI, Department of Industrial Policy and Promotion" (OM No. P-45021/2/2017-PP(BE-II dated 15th June 2017 as amended from time to time), purchase preference will be given to the bidder. Necessary certification for local content must be submitted by the prospective bidders strictly as per Annexure I", on their letterhead.

4. PERFORMANCE SECURITY

a. The successful bidder has to give Performance Security Deposit in the form of an Account Payee Demand Draft / Fixed Deposit Receipt from an Indian commercial bank / Bank Guarantee from an Indian commercial bank / a counter Letter of Credit (LC) from our bankers (in case of foreign order), for **3 %** of Order Value, immediately after receiving the purchase order. Performance Security should remain valid for a period of sixty days beyond the date of all contractual obligations including warranty obligations.
b. Successful tenderers Performance Security will be forfeited if the purchase order / contract is not executed as per the terms and conditions mentioned therein.
c. Performance Security Deposit without any interest will be returned only after complete execution of purchase order (including warranty period), as per purchase order 's terms and conditions.

5. **A.** In a tender, either the Indian Agent on behalf of the Principal / OEM (Original Equipment Manufacturer) or Principal/OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.

   B. If an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.

Failure to adhere to the above conditions will lead to automatic disqualification of bid. Tenders submitted by the Indian agent on behalf of his principal /OEM should be supported with a letter of authority from the Principal/ OEM.

In case the manufacturer does not have an authorised representative in India at the time of submission of the bids and the company appoints a representative later on, SAMEER will only correspond with the manufacturer.

6. **Further details concerning 'Technical Bid' and 'Price Bid' are given below :**

A. Technical Bid :

- Original manufacturer's technical specification sheet must support details provided in the Technical bid with all the specifications/ relevant technical Literatures/Brochures/Catalogues for the item. Bids received without the printed technical specification sheet/brochures/catalogues for item will be technically disqualified.
- The Technical Bid should not contain any **financial information.**
- The item and accessories quoted must be from original manufacturer and must be first purchased (**No second hand item/sub-item will be accepted**)
- In case the bidder is the authorised representative of a foreign manufacturer/supplier, a certificate from the principal must be included in the technical bid.
- In case of departure or substitution from the particular specification contained in the tender document, please indicate clearly as 'Alternate offer' and should contain sufficient details to show that the alternative would equally serve the purpose. All relevant technical data should be enclosed. In case of equipment, the itemised cost of essential accessories, optional accessories and spares required need to be specified.

- **Technical Bid should contain the following information :**
  a. Technical Specification
  b. SECTION III of Tender Document i.e. Commercial Terms & Conditions duly filled, stamped and signed.
  c. A copy of '**Price Bid**' with all financial figures **suppressed/deleted.**
  d. Certification for local content (Annexure I).
  e. A valid registration certificate from DPIIT as per Sr. No. 4 of Section I, if applicable.

Technical Bid without the above information will not be considered.

B. Price Bid :

Price bid shall contain the following information:

a. Quotation for the items (including the price break up for all options and accessories).
b. TAXES , DUTIES AND LEVIES if applicable should be clearly specified.
c. Discount offered on quoted price (considering that SAMEER is an R&D organisation).
d. Total price should be mentioned in both figures and words. Alterations, if any, should be attested / initialled.
e. The bid shall be free of hidden costs / ambiguity.
f. There shall be no overwriting.

7. Tenders/Bids should be dropped in **Tender Box** only.

8. Tender received via email, fax and **Late Tenders** will not be considered.

9. Unsuccessful bidders will **not be formally informed** of the result of their tender.

10. Only **Technical Bid** will be opened on the next day of the due date. The Price Bids of the technically short listed tenderers will be opened at a later date.

11. For any clarification please mail at purchase@sameer.gov.in

SECTION - II

TECHNICAL SPECIFICATION

1. SCOPE

This specification covers requirement for manufacture, supply, installation & commissioning of Water cooling system for LINAC System comprising of

a. OUTDOOR QUALITY PACKAGED AIR COOLED WATER CHILLER UNIT (Qty: 10TR x 1 No.) along with HMI and GUI.
b. CONTROL INSTRUMENTATION INCLUDING TEMPERATURE SENSORS (Qty: 1 set)
   The work includes manufacture, assembly and integration of all sub-assemblies at vendor's place, testing (demonstration), documentation, crating, safe delivery and installation & commissioning of the same at SAMEER, Navi Mumbai.
d. 3 YEAR AMC AFTER ONE YEAR WARRANTY (optional)

REMARKS: Vendor to state Complied / Not Complied - Deviations:

2. Applicable Drawings & Documents

List of applicable drawings & documents

1	TECHNICAL SPECIFICATION FOR WATER CHILLER	TABLE A & A1
2	ELECTRICAL MONITORING, CONTROL INTERLOCK & INTERFACE DOCUMENT	LIST B & B1
3	INSPECTION & ACCEPTANCE PROCEDURE	LIST C

REMARKS: Vendor to state Complied / Not Complied - Deviations:

3. MATERIALS

Materials & standard parts which are not specifically described herein & are under the scope of supply of the vendor shall be of genuine quality & in accordance with good practice pertinent to the manufacture of mild steel mechanical structure.

Unless otherwise specified in the drawings, the material of construction for all the parts of mechanical structure covered by this tender shall conform to the relevant standards.

Procurement of materials:

All material used shall confirm to correct size, quality. Material shall be first grade, free from scratches, dents, twists, broken edges and free from rust.

All materials should be treated for anticorrosion before putting them to assy.

All wiring insulation should be PVC. Teflon coated wires should not be used. The vendor has to insure Teflon material in not used in the chiller components except Teflon tape.

REMARKS: Vendor to state Complied / Not Complied - Deviations:

3A. Fasteners & Hardware

All fasteners should be confirming to BIS.

REMARKS: Vendor to state Complied / Not Complied - Deviations:

3B. Lifting Arrangement

Vendor shall make provision for lifting holes/eye bolts etc. to lift subassemblies & considering C.G (center of gravity) for stable lifting.

REMARKS: Vendor to state Complied / Not Complied - Deviations:

4. FABRICATION REQUIREMENT

4A. General

Vendor shall prepare the shop drawings, bill of materials and component layouts, and shall fabricate, inspect, test, package and deliver the structure to SAMEER as per details given in this specification. Vendor's scope of work shall terminate only when the complete Water cooling system is delivered to SAMEER in good condition, without any damage installed and demonstrated.

Stage wise detailed manufacturing plan schedule and sequence of assembly to be adopted for fabrication of Water cooling system shall be submitted for approval of the Purchaser.

REMARKS: Vendor to state Complied / Not Complied - Deviations:

4B. Cleanliness & Surface Finish

All scales, dents, burrs, weld spatter, oxide, oil and other foreign materials shall be completely removed, from the material surface and through pipes. Items that will not permit their cleaning after complete fabrication shall be cleaned prior to assembly

REMARKS: Vendor to state Complied / Not Complied - Deviations:

4C. Handling

Care shall be taken in handling of the sub-assemblies at all stages of manufacture, testing, inspection and shipping. All necessary precautions shall be taken to protect the surfaces from damage. Permanent/non repairable deformation as a result of faulty handling during manufacturing stage or during transportation shall be a cause for rejection of the total assembly.

REMARKS: Vendor to state Complied / Not Complied - Deviations:

5. INSPECTION & ACCEPTANCE PROCEDURE: REFER LIST – C

A. All the temperature and electronic tests are to be carried out at supplier's manufacturing facility as per relevant standards by manufacturer and report to be submitted to SAMEER before dispatch of the machine. SAMEER will depute their Engineers to witness these tests.

B. Supplier has to demonstrate all the tests again after commissioning of the unit in SAMEER, Navi Mumbai.

5A. General Requirement

The vendor shall be responsible for and shall provide for and perform all the inspection and testing required as per this specification. The vendor shall have a full-fledged quality assurance set-up. If any part of quality assurance work is proposed to be sub-contracted to outside agencies, the same should be clarified in the offer.

REMARKS: Vendor to state Complied / Not Complied - Deviations:

5B. Discrepancies & Field Changes

Any discrepancies or omission from drawings, specifications or other documents or any doubts arising as to the meaning or intent of any part thereof shall be referred to the Purchaser for which written clarification will be issued by the Purchaser, Verbal communications should be avoided.

REMARKS: Vendor to state Complied / Not Complied - Deviations:

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6. INSTALLATION AND COMMISSIONING

A. The unit is required to be installed and integrated in SAMEER, Navi Mumbai. The chillers will then be dispatched to final installation site.

B. Supplier is required to depute their engineer for installation and commissioning at SAMEER, Navi Mumbai.

REMARKS: Vendor to state Complied / Not Complied - Deviations:

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7. DOCUMENTATION

CATALOGUES:

Catalogues/technical brochures for the chiller unit & all standard items used in chiller unit shall be enclosed along with the technical bid.

MANUALS:

Operational & maintenance manuals (mechanical & electrical) of the chiller unit to be supplied along with the machine.

REMARKS: Vendor to state Complied / Not Complied - Deviations:

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8. PRE BID MEETING AND VENDOR QUALIFICATION

Since the chiller is custom built with its own GUI and remotely controllable, vendors must attend offline pre-bid meeting and submit proof of attending pre-bid meeting along with tender document (Annexure III).

SOFTWARE: Special GUI needs to be developed for this chiller hence the vendor mush furnish proof of development of such chiller along with GUI (at least 2 no.) in recent 5 years.

Without proof of these documents, vendor will be disqualified technically without further clarification.

REMARKS: Vendor to state Complied / Not Complied - Deviations:

TABLE-A

Sr.No.	Specification	Required Specification	Remarks
1	Chiller Capacity	10 TR Qty-1 No.	
2	Compressor With Crank Case heater	Vendor to specify	
3	Condenser	Vendor to specify	
4	Evaporator Type	Vendor to specify	
5	Chiller water pump to circulate chilled water through refrigeration System	Vendor to specify Type :Centrifugal/ scroll Model Vendor to specify **Flow: LPM 150** **Head: 80 Meters**	
6	Expansion Value	Vendor to specify	
7	Filter dryer	Vendor to specify	
8	Safety devices	a. High pressure sensor make Vendor to specify b. Low pressure sensor make : Vendor to specify c. Antifreeze protection Make : Vendor to specify d. Strainer Construction e. Material:SS304 Make : vendor to specify f. Flow meter Make IFM g. Ball valve for chilled Water of Chiller material:SS304 Make : Vendor to specify	
9	Chiller Tank	a. Water capacity:**400 Ltr (Min.)** b. Construction material : SS304 c. Overflow protection d. Drainage e. Thermal insulation f. Float level sensor and sight glass (glass matl) g. Placement internal / external	
10	Electrical Specification	a. Contractors Make : Vendor to specify b. Relays Make: Vendor to specify c. Connectors Make: Vendor to specify d. Single phase preventer Make : Vendor to specify e. Transformers Make: Vendor to specify f. MPCB for Compressor Make: Vendor to specify g. Wiring: Wire make: Vendor to specify	
11	Electric power supply V / PH / Hz	415/3/50 4 wire	

12	Led Indication	a. Power ON b. Compressor ON for each circuit c. Chiller pump ON refrigeration system ON d. Chiller pump of load ON e. HP / LP trip for each circuit	
13	Automatic operation system	Thermostatic Control Controller Make: Vendor to specify Carel make PLC with custom GUI	
14	Low output operation (Optional)	NA	
15	Refrigerant	R410a or any other	
16	Water inlet connection with Ball valve of 1-1/2" BSP	Size:1-1/2"BSP Female for 10TR Type : Through hole material:SS304	
17	Water outlet connection with Ball valve of 1-1/2" BSP	Size:1-1/2"BSP Female 10 TR Type :Through hole material:SS304	
18	Overall size L x W x H	Vendor to specify	
19	Structure and moving arrangement	M.S. frame with M. S Sheets, powder coated mounted on trolley Structure at base (optional Castrol Wheel with locking arrangement)	
20	Standard accessories	Dry run protection (No flow), Low & High Voltage	
21	Special features	Inverter type / hot gas bypass to achieve temperature stability of +/-1 Deg C (optional)	

REMARKS: Vendor to state Complied / Not Complied - Deviations:

Ratings: 3

SR. NO.	SPECIFICATION		REMARKS
1	**OPERATING PARAMETERS**	**RATINGS**	
1.1	Chiller output Flow setting	150 lpm @ 80m head for 10TR	
1.2	Chiller output Temperature settable	24°C to 32°C ±2°C	
1.3	Max. Chiller water output Pressure	Vendor to specify 10TR	
1.4	Heat load	35 kW for 10 TR	
1.5	Chiller Tank volume Ltr.	Supplier's std. **400 Ltr. minimum**	
1.6	Ambient temperature range	4°C to 50°C	
1.7	Chiller output connection with ball valve	Ø 1-1/2" BSP Female thds.	
1.8	Chiller input connection with ball valve	Ø 1-1/2" BSP Female thds.	
1.9	Chiller internal plumbing in	S.S 304	
2.0	Chiller to Heat load distance	>100 Mtr.	
2.1	Water Pumps make	Grundfoss or equivalent	
2.2	Noise level of each chiller	For 10TR Less than 90 dB	
2	**REFRIGERATION SYSTEM (2 independent Circuits 5 TR)**	**MAKE/TYPE/ RATING /MAT.**	
2.1	Refrigerant gas: R410a	Vendor to specify	
2.2	Refrigerant piping : Copper	Vendor to specify	
2.3	Compressor: Scroll type	Vendor to specify	
2.4	Condenser: Air cooled	Vendor to specify	
2.5	Fan for Condenser	Vendor to specify	
2.6	Electronic Fan speed controller (optional)	Vendor to specify	
2.7	Evaporator	Vendor to specify	
2.8	Expansion device	Vendor to specify	
2.9	Liquid line direr	Vendor to specify	
2.10	Liquid line sight glass	Vendor to specify	
2.11	Liquid line solenoid valve (Optional)	Optional	
2.12	Water tank size: S.S 304	Vendor to specify	
2.13	Water feed connection: S.S 304	Vendor to specify	
2.14	Tank overflow connection: S.S 304	Vendor to specify	
2.15	Tank drain connection: S.S 304	Vendor to specify	
2.16	Tank low water level protection	Vendor to specify	
2.17	Sight glass and water lever sensor with hi low for checking water level in tank	Vendor to specify Sight glass should be glass material	
2.19	Insulation	Nitrile rubber	
2.20	Tank Heater in Kw (Optional)	Optional	
2.21	Digital temp. sensor with digital o/p and data logger for water in and out	**Output on HMI and remote on Ethernet comm, Carel PLC**	
2.22	Digital ambient temperature meter with digital output and data logger	Output on HMI and remote on Ethernet comm, Carel PLC	
3	**ELECTRICAL & SAFETY DEVICES: CHILLER**		
SR. NO.	**SPECIFICATION**	**MAKE/ MAT.**	**REMARKS**
3.1	Pressure Gauge	Output on HMI and remote on	

	Digital (0-150 Psi) with Digital o/p & Data logger	Ethernet comm, Carel PLC	
3.2	Flow Meter(0-200 Lpm) Digital with digital o/p & data logger	Output on HMI and remote on Ethernet comm, Carel PLC	
3.3	Strainer	Vendor to specify	
3.4	Electrical Power supply	400V,50Hz Three phase, 4 wire	
3.5	Operating Voltage Range	415+/-10%	
3.6	Mains ON/OFF switch	Vendor to specify	
3.7	MCBS for all the motors & heater.	Vendor to specify	
3.8	Contractor & MPCBs.	Vendor to specify	
3.9	Single phasing preventer with phase sequence fault protector & voltage hi/low.	Vendor to specify	
3.10	Electronic low water level protection for pump (optional). Or float switch	Vendor to specify	
3.11	HRC fuses/Isolator for incoming power supply.	Vendor to specify	
3.12	High & low pressure cutout for the compressor.	Vendor to specify	
3.13	Crank case heater for oil pump of the compressor.	Vendor to specify	
3.14	Antifreeze protection.	Vendor to specify	
3.15	Complete hydraulic circuit in non-ferrous material.	Vendor to specify	
3.16	LED indications:	Vendor to specify	
3.17	Power ON	Vendor to specify	
3.18	Pump ON	Vendor to specify	
3.19	Compressor ON	Vendor to specify	
3.20	Water level low	Vendor to specify	
3.21	HP/ LP Trip	Vendor to specify	
3.22	Supply of 6C hard wired cable and communication cable 50 meter length	Vendor to specify	
4	**FRAME CONSTRUCTION**	**MAKE/ MAT.**	
4.1	Tube frame / Angle frame.	MS POWDER COATED	
4.2	Front Panel (Control panel)– Fixed	MS POWDER COATED	
4.3	Side Panels –With Lift -off /Hinge arrangement	MS POWDER COATED	
4.4	Top Panels –With Lift -off /Hinge arrangement	MS POWDER COATED	
4.5	Bottom panel-Fixed with mesh for rats	MS POWDER COATED	
4.6	Castor wheels- 4"Cast iron (Optional)	Vendor to specify	
4.7	Eye bolt (Optional)	Vendor to specify	
4.8	Fasteners (TVS or equivalent make)	S.S 304	
4.9	Frame Size: mm x mm x mm	Vendor to specify	
4.10	Total weight in Kg:	Vendor to specify	
4.11	Combined Noise level of Pumps dB	Less than 90 dB	
4.12	Make of Pumps: Grundfoss or equivalent		

TABLE A-1

FAULT INDICATION

1. Water Pump Trip	:	This indicator glows when Water pump motor will get overloaded.
2. Condenser Fan Trip	:	This indicator glows when condenser fan will get overloaded.
3. HP Trip	:	The indicator for HP Trip glows when refrigeration System operates on high pressure. This may be either Due to filter / condenser clogging with dust or due to Condenser fan motor burnt or due to very high ambient temperature. After rectifying, press the reset Button provided on HP Trip to start the unit.
4. LP Trip	:	The indicator for LP trip glows when refrigeration system operates on low pressure. This problem will occur when refrigerant gas leaks out, or during very low ambient & cooling water temperature. In first case, gas recharging is necessary & in second case, it resets automatically when ambient temperature or water temperature increases to normal.
5. Compressor Trip	:	This indicator glows when compressor trips due to Compressor overload.
6. High temperature	:	This indicator glows when the Water temperature Increases beyond the high temperature set point of thermostat, Factory setting of this thermostat is 50°C.
7. No Water Flow	:	This indicator will glow when there is no flow of Water or water flow is less than 30 ltr./min & pump will stop by the operation of flow switch.
8. Single phase preventer trip.	:	This indication glows when there is phase failure in the electrical supply.
9. 'Antifreeze trip.	:	This indication glows when water temperature goes 8°C
10. Low Water level	:	This indicator Glow when the water level goes below the limit in tank of the chiller or hydronic system.
11. Ambient temperature fault	:	This indicator will glow when ambient air temperature in the room crosses 50°C.

12. Temperature controller fault : This indicator will glow if any of the system temperature sensed by programmable temperature controller crosses set point.

Machine will indicate fault in any of the above faulty conditions

REMARKS: Vendor to state Complied / Not Complied - Deviations:

LIST B

Operational Specifications.

1) The system has to maintain a constant temperature settable in the range of 24°C to 32°C, +/- 1°C variation around the set temperature. +/- Hysteresis or hi/low option can be given.

2) The chiller should have Ethernet I/p communication with settable i/p and all process parameters can be settable through chiller HMI as well as remotely. Additionally 3 wire communication for on/off/ reset and emergency off in case of breaking of communication cable. **Carel PLC is preferred.**

3) The water cooling system is integrated with the LINAC system; hence 3 phase supply will reach only when LINAC is **reset**.

4) In the **auto mode** a command will come from the **LINAC console (**typically +28V dc) using potential free contacts of a relay and the water cooling system should star or Ethernet i/p port.

5) The water cooling system should display **locally** all the system parameters (temperature, pressure, flow rate) digitally using a PLC/PID module as well as give digital output with Ethernet I/p communication.

6) The system should have a potential free contact for **fault interlocking**. Any problem with the water cooling system should result in changeover of this potential free contact or Ethernet i/p.

7) The programmable temperature controller /PLC should monitor all temperatures of the system. In case the temperature sensed by any sensor increases, it should increase cooling in the corresponding cooling line to keep it within set value. It will give fault signal .The chiller will still remain on with highest LPM capacity till temperature in that line reached safe value.

8) **PLC programming and software development to monitor process parameter in vendor's scope**. The vendor has to demonstrate this feature during commissioning.

9) Automated flow control valve is not required in this chiller.

10) Suitable Turbidity meter should be incorporated in the system.

11) Additional grundfoss make back-up pump of same capacity in case of failure of main pump **(optional).**

12) Chiller should have at least 10"touch screen HMI **sunlight readable**

13) Uptime for chiller should be more than 95%

REMARKS: Vendor to state Complied / Not Complied - Deviations:

LIST B1

WATER COOLING SYSTEM CONTROL INTERFACE

I. System water Flow Rate:-

Sr No	Monitoring	Controls	Interlock	Interface
1	Digital indicator for water flow reading on Panel Range(0 to 200 lpm)			Vendor shall provide a transducer unit which will give ***digital*** signal for flow rate of water for displaying water flow rate on GUI as well as data log. (Refer Table A 1)

II. System Water Pressure:-

Sr No	Monitoring	Controls	Interlock	Interface
1	Dial indicator for water pressure reading on Panel Range(0 to 200 PSI)			Vendor shall provide a transducer unit which will give ***digital*** signal for pressure of water for displaying water pressure on GUI as well as data log. (Refer Table A 1)

III. System Water Level:-

Sr No	Monitoring	Controls	Interlock	Interface
1	Visual indication as well as water level sensor with digital output to identify water level.		Water level below the set expected level should put Pump OFF.	Vendor shall provide digital water level output to display water level fault on GUI (Refer Table A 1)

IV. Temperature sensor:-

Sr No	Sensor	Qty.	Interlock	Interface
1	Chiller should have inbuilt digital temperature sensor in input and output water lines	1 each	Output from temperature sensors to be used by chiller PLC to control duty cycle.	Vendor shall provide Temperature output to display thermal fault on HMI as well as to remote PC through Ethernet i/p

Note: 1

All respective connections are to be brought on technically suitable DIN rail terminals for control inputs & suitable detachable mating connectors for flow-temperature sensing output in the Junction box. This Junction box shall be easily accessible for service purpose.

Note: 2

Heavy duty colored DIN rail mount terminal blocks of suitable voltage and current ratings are to be used.

REMARKS: Vendor to state Complied / Not Complied - Deviations:

LIST C

INSPECTION AND ACCEPTANCE PROCEDURE

1) The vendor has to demonstrate a constant output temperature set by the user under simulated conditions when 36 kW power is dissipated in the water system.

2) The vendor has to demonstrate a constant temperature output ranging from 24°C to 32°C with a variation of say +/- 1°C around the set temperature with full power dissipated and no load condition.

3) The vendor has to demonstrate the proper functioning of the **PLC used**. It has to accurately demonstrate all the system related parameters such as temperature, flow rate, pressure and other relevant parameters locally.

4) The vendor has to demonstrate the indication of the fault relay when any parameter goes above a threshold. There has to be provision for to fro communication between chiller HMI and LINAC control console.

5) The vendor has to demonstrate performance of chiller heat load at SAMEER, Navi Mumbai.

6) The vendor has to demonstrate Self-diagnostic feature for chillers.

7) The vendor should demonstrate its software functionality. The GUI should show chiller parameter and process parameter coming out from SMC digital manifold via IO link. Details of process parameters will be communicated after placement of PO. Procurement of SMC digital manifold is not in vendor's scope but he has to demonstrate its process parameter on HMI and remote pc on Modbus. The process parameter should be remotely settable.

Pre dispatch inspection

The manufacturer/supplier shall demonstrate all functionalities of the chillers at their works during pre- dispatch inspection in front of SAMEER personnel and shall satisfy all the technical specifications as described in the tender document.

Post-dispatch inspection

A. The manufacturer/supplier's trained engineer should carry out installation and commissioning of the unit at **SAMEER, Navi Mumbai**.
B. The entire functionality of the equipment has to be demonstrated according to the specifications and acceptance procedure mentioned above in the tender document.
C. 2 sets of all the drawings, datasheets, warranty cards, electrical diagrams has to be provided with chiller. Process parameter values, operational manuals , service contact numbers , all error codes and wiring diagrams / help topics should be displayed in the chiller software with password protected user levels for Service person, SAMEER administrator and User.

SECTION- III

Commercial & Other Terms and Conditions

Vendor to state Complied / Not Complied – Deviations if any in the REMARKS column

S.N.	DESCRIPTION	ESSENTIAL CONDITIONS	REMARKS
a.	PRICES	**For Local Order : Prices** should include delivery charges up to **SAMEER's Stores**. Any additional charges, taxes and levies should be clearly mentioned. In the event of a Purchase Order, it will be the responsibility of the supplier to pay whatever charges are payable to different agencies in their country. The purchaser will not pay any charges other than the agreed price as per the contract.	
b.	TAXES , DUTIES AND LEVIES APPLICABLE	(Existing applicable rates should be mentioned)	
		1.	
		2.	
		3.	
		4.	
c.	PACKING	All the items should be packed in suitable boxes, crated and protected from damages during the transit till they are delivered to destination.	
d.	FREIGHT AND INSURANCE	a. For Local Order : To be arranged by supplier. All the items shall be delivered to **SAMEER, Rain tree road, Sector 7, CBD Belapur, Navi Mumbai-400614** after obtaining a shipping release in the appropriate pro-forma from the purchaser. The Vendor shall be fully responsible for the safe delivery of all the items from and to SAMEER Navi Mumbai and shall satisfy the purchaser that adequate measures have been taken for the same.	
e.	ANY OTHER CHARGES APPLICABLE	SUPPLIER TO SPECIFY	
f.	MODE OF DELIVERY	For Local Order : By road	
g.	DELIVERY SCHEDULE	**Vendor to specify**	
h.	WARRANTY	1 Year Min	
	Vendor's Signature:	Seal:	

i.	PAYMENT TERMS	a. 90 after delivery to SAMEER, Navi Mumbai 10% % after Testing & installation at SAMEER, Navi Mumbai	
j.	VALIDITY OF QUOTATION	90 DAYS MIN FROM THE DUE DATE.	
k.	TENDER FEE (INCLUDING GST)	Tender document may be purchased from the Accounts Section of SAMEER, Mumbai on cash payment or by Demand Draft from any commercial bank of India, drawn in favour of "**Society for Applied Microwave Electronics Engineering and Research**". If the Tender document is downloaded from website , then **the Tender Fee is not applicable.**	
l.	PERFORMANCE SECURITY	The successful bidder has to give Security Deposit in the form of an Account Payee Demand Draft / Fixed Deposit Receipt from an Indian commercial bank / Bank Guarantee from an Indian commercial bank / a counter Letter of Credit (LC) from our bankers (in case of foreign order), for 3 % of Order Value, immediately after receiving the purchase order. Performance Security should remain valid for a period of sixty days beyond the date of all contractual obligations including warranty obligations.	
m.	EXEMPTION FOR CUSTOM DUTY AND EXCISE DUTY	SAMEER is registered with Department of Scientific and Industrial Research (DSIR) for the purpose of availing **custom duty exemption** in terms of Government of India Notification No. 51/96-customs amended to 24/2007-customs dated 1st March 2007. {approx. 5.20 % duty is applicable under his notification (5 % Basic + cess/surcharge)} and **central excise duty exemption** in terms of Government Notification no. 10/97-central excise amended to 16/2007-central excise dated 1st March 2007.	
n.	SHARING LAND BORDER WITH INDIA	a. Yes / No b. If Yes, whether necessary valid registration certificate is attached along with Technical bid.	
o.	JURISDICTION	MUMBAI	

Vendor's Signature: Seal:

SECTION- IV

Format for Price Bid (in INR)

IMPORTANT

Vendor is required to submit the price bid in the given format on their LETTER HEAD.

ITEM	DESCRIPTION	QUANTITY	RATE IN INR	PRICE IN INR
I	**Manufacture, Supply, Installation and Commissioning of 10 TR outdoor quality packaged Water chiller**	**1No.**		
II	**Development of software for chiller**	**1 No.**		
III	**150 Meter communication and 6 core cable**	**1 each**		
VI	**3 Years AMC after warranty (optional)**			
VII	**OTHER CHARGES , , if any**			
1.	**TAXES AND DUTIES APPLICABLE ON ITEMS**			
	I			
	II			
	III			
	IV			
2.	**FREIGHT** from Vendor's manufacturing facility to **SAMEER Navi Mumbai**			
3.	**INSURANCE**			
4.	**ADDITIONAL CHARGES IF ANY**			
	TOTAL AMOUNT			
	TOTAL AMOUNT (IN WORDS)			
	Vendor's Signature: Seal:			

Annexure - I

Bid Security Declaration

Dated :

To,
The Registrar,
Society for Applied Microwave Electronics Engineering and Research
IIT Campus, Powai,
Mumbai 400076

Sir,

I, the undersigned, declare that:

1. I am duly authorised to submit bid and undertakings in response to your tender No._____

2. I understand that the bidders are required to submit Bid Security of the prescribed amount, while submitting bids in response to tender enquiries of the Society for Applied Microwave Electronics Engineering and Research (SAMEER).

3. As an alternative to the Bid Security, I hereby declare that my firm, which is submitting the current bid, will be suspended for the period of time specified in the request for bid document or for a period of three years if no such period of time is specified in the request for bid document, from being eligible to submit bids for contracts with SAMEER,

i. if we withdraw or modify the bid during the period of validity (including the extended period of validity) **or**
ii. If we fail to sign the contract, or to submit the performance security before the deadline prescribed in the request for bid document or in the communication sent by SAMEER.

Signature with seal:

Name: _____

Designation _____

Name of the firm _____

Place _____

Annexure - II

Self Certification for Local Content

(Should be on the letter head of the bidder)

*We [name of manufacturer] hereby confirm in respect of quoted item(s) that Local Content is equal to or more than 50% and we come under 'Class-I Local Supplier' Category. Being 'Class-I Local Supplier', we are eligible for Purchase Preference in accordance with Department of Promotion of Industry and Internal Trade's Order No.P45021/2/2017-PP (B.E.-II) dated 15.06.2017 , as modified, vide the said Department's orders No. P-45021/2/2017-PP(BE-II) dated 28/05/2018, No. P-45021/2/2017-PP(BE-II) dated 29/05/2019 and No. P-45021/2/2017-PP(BE-II) dated 04/06/2020

OR

*We [name of manufacturer] hereby confirm in respect of quoted items(s) that Local Content is more than 20% but less than 50% and we come under 'Class-II Local Supplier' Category, as per the said order of Department of Promotion of Indusry and Internal Trade

OR

*We [name of manufacturer] hereby confirm in respect of quoted items(s) that Local Content is less than or equal to 20% and we come under 'Non Local Supplier' Category.

The details of the location (s) at which the local value addition made is /are as under:

1.....

2.....

3.....

*Strike out whichever is not applicable

Date: Seal & Signature of the Bidder

NOTE :-

1 Bidder should submit Self-certification that the item offered meets the minimum local content (as above) giving details of the location(s) at which the local value addition is made in case the bidder wishes to avail the benefits under the make in India policy, if applicable.

2. In cases of procurement for a value in excess of Rs. 10 crores, the local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content to avail the benefits under the make in India policy, if applicable.

3. The orders quoted above are available on our website (https://www.sameer.gov.in/tenders.asp#page).

Annexure III
Pre Bid (offline visit) Certificate

Sub: pre-bid meeting certificate for "Development of custom built 10 TR Water Chiller with GUI"

Cooling Capacity 10 TR.
Detailed work description in GeM Bid " GeM Bid No. .: GEM/ / /
Reference is invited for the subject mentioned above.

This is to certify that the site was visited by the following representatives of the firm M/s.

Representative name:
on / /202 and the details of the work to be done were discussed by SAMEER staff.

Vendor's representative sign:
Date:

SAMEER Staff name:
SAMEER Staff sign
Date
Place:

Note to the firm: This certificate's copy is to be forwarded to us along with the technical bid in sealed envelope with your company seal and signature of proprietor on it.

Company seal and signature