

	<b>प्लाज़्मा अनुसंधान संस्थान</b>	
	<b>Institute for Plasma Research</b>	
	भाट, निकट इन्दिरा पुल, गांधीनगर - ३८२ ४२८ (भारत) Bhat, Near Indira Bridge, Gandhinagar 382 428, Gujarat (India)	
	Tel. :- 079 – 2396 2260, 2262, 2263, 2264. Fax :- 079 – 2396 2277	E-mail :- <a href="mailto:stores@ipr.res.in">stores@ipr.res.in</a>

## Technical Specifications

Comprehensive maintenance and servicing of water coolers, split & window air conditioners, deep freezers, refrigerators and water purifiers totaling about 515 units located in IPR main campus, IPR establishments known as FCIPT, IPR Extension Lab both in Gandhinagar

**SCOPE, TERMS AND CONDITIONS**

**1. SCOPE OF WORK**

**(A) The scope includes the 'Comprehensive annual service and maintenance contract 'of Split/Window Air conditioners, Water Coolers, Water Purifiers, Deep Freezers & Refrigerators located in IPR main campus, Nr. Mother Dairy, village Bhat, Gandhinagar and other establishments of IPR known as IPR new Extension Lab , FCIPT located in GIDC, Gandhinagar.**

Three preventive services for each equipment shall be carried out in a year at equal interval to keep all the units in satisfactory working condition.

Please refer **Annexure – I** of this Section for Service Specifications as required by IPR.

**(B) As and when required:** Scope of work also includes dismantling of split ACs, installation of split ACs with refrigerant supply and it's charging, supply of accessories related to split ACs with installation as and when require by IPR.

Please refer Section – D, PART – II Commercial Bid (**C, D & E**). Quantity mentioned under C, D & E may vary as per actual need basis as and when require and payment will be made for actual work done basis.

**2. LIST OF EQUIPMENTS**

Please refer **Annexure - II** of this Section for the list of equipments covered in the contract.

**3. WORKING HOURS OF THE INSTITUTE:**

The working hours of the institute in terms of days and time during the tenure of contract shall be as follows:

- a) Normal Time of working: 9.00 a.m. to 5.30 p.m.
- b) Normal days of working in a week: Monday to Saturday.
- c) Normal Non-working Days: Sunday and closed holidays declared /observed by the Institute.

**4. TERMS AND CONDITIONS**

- a) The rates quoted shall be FIRM and FIXED and shall be inclusive of all services, repairs/ replacement of parts wherever needed.
- b) The contractor has to attend the three services in a year for each unit of split/window Ac, water cooler, deep freezer/refrigerator & water purifiers as per the schedule fixed by IPR. Breakdown calls of above units **after receiving complaint/repair/replacement intimation from IPR**, contractor has to attend it within 24 hours of time. In case of major/critical service/repair call contractor has to attend it within 04 hours of a time.

- c) The intimation of complaint/breakdown call from IPR will be given by way of telephone/email/letter. One register will be maintained to record the time of the complaint/breakdown call given to the contractor.
- d) IPR may add or delete any unit during the period of contract and accordingly value of contract will be amended.
- e) The services/repairs/replacements shall normally be carried out in our premises. In case, any equipment or its parts are to be taken out to Contractor's Workshop for repairs/replacements/ services, all arrangements are to be made by the Contractor at his cost for taking out the items and bringing back the same. This includes labour, transportation etc. in addition to all other works related in this regard. The items can be taken out of IPR with valid Returnable Gate Pass. Contractor will be allowed to take out faulty/defective component/item against replacement of genuine working component/item.
- f) The contractor shall, during the tenure of contract, be able to arrange timely deployment of suitable technicians in sufficient numbers along with the required tools, tackles, instruments as well as spares and consumables for uninterrupted operation of equipments included in the maintenance contract. The contractor shall deploy service technicians who will be involved in the service and repair work. The contractor or his authorised technician should have relevant experience and shall invariably visit the locations of units installed as stated above. Besides, the contractor or his senior supervisor shall be available at IPR, as and when required by IPR to attend any major / critical services if require. IPR will not allow deployment of persons not suitable for carrying out the maintenance & servicing work.
- g) The contractor shall, after receiving the intimation of complaint for repair/replacement, be able to arrange timely deployment of suitable technicians along with the required tools, tackles, instruments as well as spares for uninterrupted operation of equipments included in the maintenance contract.
- h) The contractor should adopt standard methods of working. In case of any damage to nearby part/equipment/system due to the fault of contractor, appropriate amount will be recovered from his bill.
- i) Only genuine and original spare parts are to be used during repairs/replacements. (Manufacturer's delivery challan and marks/emblem on parts shall be proof of the parts being genuine). Use of incorrect invoice or mark will be treated as a breach of contract. Makes of parts or any components shall be approved by Engineer In charge if the original manufacturer does not exist.
- j) The parts, which are to be used during repairs/replacements, must be routed through IPR Stores immediately after entry at the Main Gate and to be informed to Engineer in-charge / Supervisor.

- k) The mechanically / electrically failed sealed compressor should be replaced with factory repaired / new compressor. Copper condenser coil leakages should be rectified by contractor or replacement with new copper coil will be performed by contractor if not repairable. If leakage found in any aluminium condenser coil then it should be replaced with new copper coil without any additional cost to IPR.
- l) The Contractor shall not, in any circumstances, sub contract any portion / any phase of the work envisaged in this Work Order without prior written approval of IPR. The decision of IPR to accept/ reject the sub-contract will be final.
- m) Services/repairs/replacements shall be carried out at any time during regular working hours, overtime hours or on holidays, as called upon by IPR to ensure satisfactory working of each unit.
- n) Repair/replacement is to be carried out with our prior approval and in the presence of IPR representative.
- o) A Service card shall be prepared by the contractor for all the units placed for service & maintenance and activity of each equipment shall be recorded with the work done (service, repair, replacement etc.) therein jointly by the contractor and IPR supervisor/engineer. In addition, the contractor shall maintain a self- speaking logbook/ledger indicating date wise events for each unit during the tenure of contract. The register shall contain the information like date, preventive maintenance / break down maintenance, problem, replacement required, date of complaint, date of completion, signature of contractor's representative, signature of IPR supervisor / engineer, remarks, etc. This will be considered as the basic record for all purposes.
- p) The decision of IPR Engineer / Supervisor in respect of repairs/replacements will be binding on the contractor.
- q) Part C of Section-D, Part - II covers the all in all servicing and maintenance with material supply of inverter type split ACs which may come under contract in near future and quantity may vary. Part D of Section-D, Part - II, covers the installation with gas charging and dismantling work of split ACs as and when require. Part E of Section - D, Part - II covers the supply and installation of accessories of split ACs like MS stand, copper/drain pipe, plywood for indoor unit fixation, cable and PVC raceway etc. as and when require. Quantity mentioned in Part D and E of Section - D, Part - II may vary according to need and payment for the same will be made as per actual work done basis.
- r) IPR will not be responsible for the safety and security of material brought in by the contractor and the contractor will be fully responsible for the safe custody of his material.
- s) The contractor should obtain gate pass from IPR for taking out his material from IPR campus and will not be allowed to take out any material on public and Institute holidays as well as before 9.30 Hrs. and after 17.00

hours on week days. The entry in the gate for all the material brought in by the contractor and registering the same with the Stores shall be the basis for issue of Gate Pass for taking out the contractor's material.

- t) IPR will not supply any tool / equipment, refrigerant gas, except power and water supply for any work. The contractor shall get approval of each completed work from IPR supervisor / engineer.
- u) The working parameters of any equipment will be shown to IPR supervisor / engineer, whenever called upon to do so.
- v) Notwithstanding as to what is specifically stated in the specifications, the contractor has to attend all the work/s that is/are required to be carried out to ensure proper performance of all equipments.
- w) As the work may need to be executed in a restricted area, the contractor should strictly observe all safety, security and labour regulations. The contractor shall be responsible for the proper behaviour of the staff deputed by him, and also for any breach of security regulations, thefts, sabotage etc. The contractor shall withdraw any person so desired by IPR, if in the opinion of IPR, it is not desirable to permit that particular person to work inside the campus.
- x) It will be the entire responsibility of the contractor to insure his employees against all risks. It will be the liability of the contractor to meet claims over the lives of any employee including himself.
- y) All domestic units will be handed over in present working condition and shall be maintained by the contractor, till the end of contract period/extended contract period. You will also be responsible to handover all units in working condition to incoming contractor.

#### **5. TAKING OVER AND HANDING OVER**

All the units included in the contract shall be taken over by the contractor for maintenance and the contractor shall be responsible to hand over the same in working condition barring the normal wear and tear but certainly not in a deteriorated condition to the IPR/Incoming Contractor at the time of conclusion of the contract. The handing over procedure shall be commenced 15 days before conclusion of the contract and completed on the last date of the validity of the contract. Security Deposit will be released after successful handing over/taking over of all units.

**6. ADDITION AND DELETION OF THE UNITS FOR MAINTENANCE**

The Institute may include additional units in the Annexure II of this Section & A, B, and C of Section – D, Part – II, or delete the units mentioned in Annexure II of this Section & A, B, and C of Section – D, Part – II. Accordingly contract will be amended.

**7. MANPOWER ARRANGEMENT**

The contract if awarded, the contractor shall deploy the suitable skilled manpower after receiving call for servicing & maintenance/repair of units. The contractor personnel must have ID-card, safety shoes & police verification details whoever attending service/repair.

**8. PENALTY**

- a. The contractor has to attend the repair and replacement of equipment on intimation/complaint basis. After receiving intimation from IPR, contractor has to attend it within 24 hours of time. In case of major/critical service/repair contractor has to attend it within 04 hours of a time. In case the contractor fails to attend minor/major complaint within agreed period, penalty of Rs.200/- per day per unit will be imposed on the contractor.
- b. For Part D and E of Section – D, Part – II, if contractor fails to start the work of dismantling, installation and supply of accessory items after 10 days of intimation, then penalty of Rs. 200/- per day will be imposed on the contractor.
- c. Contractor and their deployed staff will observe all Safety norms of the Institute, failing which IPR will impose Rs.100.00 Penalty per fault per person.

**ANNEXURE- I**

	<b>प्लाज़्मा अनुसंधान संस्थान</b> <b>Institute for Plasma Research</b>	
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**SERVICE SPECIFICATIONS**

The scope of work is broadly divided into two parts, (i) Preventive maintenance,(ii) Break down service. The service check and the repair work envisaged are as follows.

**1. Split/Window Air conditioners:**

<b>Servicing work</b>	<b>Repair work</b>
a. Cleaning of air filters. b. Cleaning of Cooling Coil and Condenser with nylon wire brush and air blower. c. Oiling / Greasing of fan motor. d. Checking current, voltage and grill/room temperatures. e. Cleaning of complete unit. f. Checking for internal overloads/ starting and running capacitors, functioning and thermostat/sensor operations.	a. Repair/ replacement of spares whenever required, to ensure continuous operation and satisfactory performances. b. Rewinding of motor & gas charging. c. In case of any fault with electronic operating kit, complete kit should be replaced. d. The mechanically / electrically failed sealed compressor should be replaced with factory repaired / new compressor. Leakages of copper condenser coil should be repaired or replaced with new copper condenser coil if not repairable. If leakages found in aluminum condenser coil then it should be replaced with new copper condenser coil without any additional cost.

The number of preventive services required for split/window air conditioners shall be 3 (three) in a year. However IPR shall decide the schedule, which has to be honoured by the contractor.

**Note for Preventive repair / Replacement:**

Preventive repair / replacement for split/window air conditioners shall be carried out to avoid possible breakdowns at the time of service. Repair / replacement of any part, if necessary, must be carried out immediately for all types of units.

**2. Water Coolers/Deep Freezer/Refrigerator**

<b>Servicing work</b>	<b>Repair work</b>
a. Cleaning of condenser coil with wire brush and air blower.	a. Repair/ replacement of spares whenever required, to ensure continuous operation and satisfactory performances.
b. Oiling / greasing of fan motor.	b. Rewinding of motor & gas charging.
c. Checking ampere, voltage and water temperature.	c. The mechanically / electrically failed sealed compressor should be replaced with factory repaired / new compressor.
d. Cleaning of complete unit.	

The number of preventive services required for water coolers/Deep Freezers/Refrigerators shall be 3 (three) in a year. However IPR shall decide the schedule, which has to be honoured by the contractor.

**Note for Preventive repair / Replacement:**

Preventive repair / replacement for water coolers/deep freezers shall be carried out to avoid possible breakdowns at the time of service. Repair / replacement of any part, if necessary, must be carried out immediately for all types of units.

**3. Water Purifiers/RO**

<b>Servicing work</b>	<b>Repair work</b>
a. Servicing of Zero-B Puriline 4 L Water Purifier units & RO units of 25 Lit/hr & minor repair work if any	a. Replace the membrane / pump/ electrical items/ cartridge / filter /Base/ O-ring/ connecting hose pipe/tubes and other accessories / fittings whenever required
b. Cleaning of filters periodically	b. Replacement of hose connections of water cooler when required
c. Tagging should be done on the unit for service done and service due date	c. RO main membrane should be of reputed make (Filmtech Dow / Ion Exchange/ Kent/equivalent).



The number of preventive services required for water purifiers/RO shall be 3 (three) in a year. However IPR shall decide the schedule, which has to be honoured by the contractor. Replacement of Zero-B Puriline 4L water purifier cartridge required after exhaust of cartridge life.

**Note for Preventive repair / Replacement:**

Preventive repair / replacement for water purifiers/ RO shall be carried out to avoid possible breakdowns at the time of service. Repair / replacement of any part, if necessary, must be carried out immediately for all types of units. In case of RO units replacement of 5-micron (spun filter) filter is necessary in half yearly or earlier if system requires. Carbon activated cartridge should be replaced half yearly. Sediment filter (1-micron filter) will be replaced every year. All spares of water purifiers/RO are in contractor scope.

**ANNEXURE - II**

	<b>प्लाज़्मा अनुसंधान संस्थान</b> <b>Institute for Plasma Research</b>		
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**LIST OF EQUIPMENTS**

Sr. No	Make	Model	Cooling Capacity	Qty
<b>WATER COOLERS</b>				
1.	Voltas	Tushar/FS-150/FSS	150 Ltr.	30 nos.
2.	Bluestar	BSL/SDLx15150/ST8150/MS-150	150 Ltr.	20 nos.
3.	Usha	SS 150/150	150 Ltr.	01 no.
4.	Usha/Shriram		150 Ltr.	02 nos.
5.	Voltas	FSS 40/80	80 Ltr.	02 nos.
6.	Bluestar	BSL-SDLx480	80 Ltr.	05 nos.
7.	Voltas	SS2040	40 Ltr.	08 nos.
8.	Bluestar	BSL-480/SDLx240/PC240	40 Ltr.	17 nos.
9.	Usha	SS2040G	40 Ltr.	09 nos.
10.	Shriram	SAS 4080	40 Ltr.	02 nos.
			<b>Total</b>	<b>96 nos.</b>
<b>DEEP FREEZER</b>				
11.	Bluestar	BSL-CHF500	500 Ltr.	01 no.
12.	Assembled	Apollo	400 Ltr.	02 nos.
			<b>Total</b>	<b>03 nos.</b>
<b>REFRIGERATOR</b>				
13.	Samsung	RT-33	321 Ltr.	02 nos.
14.	LG/Samsung	Inteloo cool/RT-26ADES	230/250/ 255 Ltr.	12 nos.
15.	Godrej	Cold Gold Deluxe	170 Ltr.	03 nos.
16.	Videocon		47 Ltr.	12 nos.
			<b>Total</b>	<b>29 nos.</b>
<b>WINDOW AIR-CONDITIONERS</b>				
17.	Voltas/Electrolux		1.5 TR	02 nos.
			<b>Total</b>	<b>02 nos.</b>
<b>SPLIT AIR-CONDITIONERS</b>				
18.	LG	LP-K3685 QC	3 TR	05 nos.
19.	Shriram	SMS-9000	3 TR	02 nos.
20.	Bluestar	5522	1.5 TR	01 no.
21.	Amtrex		1.5 TR	03 nos.
22.	Voltas	Vectra, Vertis Premium, Vertis	1.5 TR	60 nos.

**Section-C**

		Gold, Elegant, Titanium, Premium Endura, 185ZYA		
23.	Videocon	RC 15 SP RC	1.5 TR	09 nos.
24.	Samsung	AS18EFA	1.5 TR	06 nos.
25.	Azure		1.5 TR	08 nos.
26.	Hitachi	Logicool	1.5 TR	20 nos.
27.	LG	LSK-1862 QC	1.5 TR	03 nos.
28.	Godrej		1.5 TR	20 nos.
29.	Carrier	Curve, Superia	1.5 TR	12 nos.
30.	Voltas	Vertis Premium, Vertis Gold, Vertis Pearl, Platinum, 244ZYA	2.0 TR	115 nos.
31.	Godrej		2.0 TR	09 nos.
32.	Hitachi	Logicool	2.0 TR	05 nos.
33.	Carrier	Kurve, Superia, Superia 24k	2.0 TR	17 nos.
34.	Videocon		2.0 TR	05 nos.
35.	Samsung		2.0 TR	01 no.
36.	Daikin	FT60MV16	2.0 TR	17 nos.
37.	Voltas	Silver, Classic, Vertis Gold	1.0 TR	11 nos.
			<b>Total</b>	<b>329 nos.</b>
<b>WATER PURIFIERS</b>				
38.	Ion Exchange	Zero B Puriline 4L	4 Lit/Min	37 nos.
39.	Jal Electricals	RO Water Purifiers	25 Lit/hr	09 nos.
40.	Aquaguard/Zero B	UV Water Purifiers	2 Lit/min	02 nos.
41.	Kent	UF Water Purifiers	2 Lit/min	08 nos.
			<b>Total</b>	<b>56 nos.</b>

**Total No. of Units :- 515 Nos.**