



MAHATMA GANDHI MISSION TRUST
MGM INSTITUTE OF HEALTH SCIENCES, CENTRAL PURCHASE DEPARTMENT (CPD)

3. A) Etender for HVAC System.

Tenders invited from reputed Manufactures or their authorised distributors / dealers of HVAC System at MGM Hospital, Sanpada, Navi Mumbai in the format given bellow:

Name & Address of Vendor: _____

Sl. No.	ITEM DESCRIPTION	QTY	UNIT	MATERIAL (RS)	LABOUR (RS)	RATE (RS)	AMOUNT (RS)
A	CIRCULATING SYSTEM						
1	Primary Chilled Water Pumps. Supply, Testing and Commissioning of Primary Chilled Water Pumps and suitable VFD panel as specified and details given in the data sheet. (3 pumps) Capacity : 1900 LPM of Each Pump Head : 16.0 m Min Pump Efficiency : 75% VFD panel. Supply, Installing & testing of VFD controlled pump panel for Chilled Water Pump consisting of variable frequency drive (VFD) for each pump, one dedicated microprocessor based pump controller per zone housed within the enclosure of one of the VFD with parallel pumping software duly down loaded and differential pressure sensor / transmitters along with complete control cabling from transmitter to VFD Panel as per the site requirement. The entire system along with pumps as described in the pump section must be sourced from single manufacturer only, to ensure unit responsibility. Necessary factory test certificates for entire system shall be submitted along with the equipment. Sensor / Transmitters as described in specification. System shall be BMS compatible with open protocol communication port, so that complete data can be transported to remote IBMS console. Pumps shall be installaed on inertia based foundation. (Set Consists of 4 pumps & VFD panel - 1 Pump and VFD will be installed later. All provision to add in later stage without any modfication or addition)	1	Set				

Sl. No.	ITEM DESCRIPTION	QTY	UNIT	MATERIAL (RS)	LABOUR (RS)	RATE (RS)	AMOUNT (RS)
2	<p>Secondary Chilled Water Pumps. (Zone - A) Supply, Testing and Commissioning of Primary Chilled Water Pumps and suitable VFD panel as specified and details given in the data sheet. (3 pumps) Capacity : 2100 LPM of Each Pump Head : 24.0 m Min Pump Efficiency : 75%</p> <p>VFD panel. Supply, Installing & testing of VFD controlled pump panel for Chilled Water Pump consisting of variable frequency drive (VFD) for each pump, one dedicated microprocessor based pump controller per zone housed within the enclosure of one of the VFD with parallel pumping software duly down loaded and differential pressure sensor / transmitters along with complete control cabling from transmitter to VFD Panel as per the site requirement. The entire system along with pumps as described in the pump section must be sourced from single manufacturer only, to ensure unit responsibility. Necessary factory test certificates for entire system shall be submitted along with the equipment. Sensor / Transmitters as described in specification. System shall be BMS compatible with open protocol communication port, so that complete data can be transported to remote IBMS console. Pumps shall be installed on inertia based foundation. (Set Consists of 3 pumps & VFD panel)</p>	1	Set				
3	<p>Condenser Water Pumps. Supply, testing & commissioning of Condenser Water Pumps as specified and details given in the data sheet. (3 Pumps) Capacity : 2850 LPM of Each Pump Head : 22.0 m Min Pump Efficiency : 75%</p> <p>VFD panel. Supply, Installation, testing and commissioning of VFD controlled pump panel for Condenser Water Pump consisting of variable frequency drive (VFD) for each pump, one dedicated microprocessor based pump controller per zone housed within the enclosure of one of the VFD with parallel pumping software duly down loaded and differential pressure sensor / transmitters along with complete control cabling from transmitter to VFD Panel as per the site requirement. The entire system along with pumps as described in the pump section must be sourced from single manufacturer only, to ensure unit responsibility. Necessary factory test certificates for entire system shall be submitted along with the equipment. Sensor / Transmitters as described in specification. System shall be BMS compatible with open protocol communication port, so that complete data can be transported to remote IBMS console. Pumps shall be installed on inertia based foundation. (Set Consists of 3 pumps & VFD panel)</p>	1	Set				
	Total (A)						

Sl. No.	ITEM DESCRIPTION	QTY	UNIT	MATERIAL (RS)	LABOUR (RS)	RATE (RS)	AMOUNT (RS)
B	COOLING TOWERS						
1	<p>COOLING TOWER: Supplying, installing, testing & commissioning of "CTI" certified cooling towers. Fan and motor shall be suitable for operating through VFD Complete as required confirming to specification and technical data sheet. Cooling tower for air-conditioning system shall be selected on the basis of water IN temperature 36.8°C - OUT temperature 31.3°C and ambient wet bulb 28.3°C. Selected cooling tower shall be certified for test procedure as per CTI ATC-105 & CTI STD-201 with up to date amendment. The cooling tower shall be as follows:</p> <p>Cooling Tower as described above suitable for 250 TR Water Cooled screw Chillers. Heat Rejection Capacity - Suitable for 950000 Kcal/Hr Water Flow rate - 2850 LPM Condenser Water In - 36.8 °C Condenser Water Out - 31.3 °C</p> <p>Note: The foundation as required shall be constructed and is covered under civil scope of work. AC Vendor shall give the design intent of the foundation.</p>	2	Each				
	Total (B)						
C	CHILLERS						
1	<p>Supply, Installation, testing & commissioning of AHRI certified water cooled screw chilling machines having minimum capacity of min. 250 TR at site condition with VFD, suitable for operation comprising of the following complete as per specification & Data Sheet.</p> <p>i) Single/Multiple screw type compressor semi-hermetic complete with automatic capacity control, safety switches, speed increasing gears, forced feed lubrication system etc. as per specifications. ii) The unit shall be designed to unload upto 25% of its rated capacity at Constant Condenser Water Entering Temperature at AHRI conditions. The compressor shall have mechanism for stable operation at part loads. iii) Lot- Initial/first charge of refrigerant gas and compressor oil. iv) Lot- Necessary vibration isolation mountings for the chilling unit as per manufacturer's drawing. v) All other items mentioned in the Technical Data sheet. vi) Active Harmonic filters to restrict upto 5% on all percentage load shall be considered as integral part of the chiller. (The Chiller Manufacturer shall give a testing at factory or site including the harmonic filters. The chiller display shall also have the indication of Harmonic levels at all the percentage of loads. Note - The Chiller AMC shall be inclusive of Harmonic filter and other associated banks also)</p>	2	Each				

Sl. No.	ITEM DESCRIPTION	QTY	UNIT	MATERIAL (RS)	LABOUR (RS)	RATE (RS)	AMOUNT (RS)
2	Supply, Installation, testing & commissioning of AHRI certified Magnetic Oil Free chilling machines having minimum capacity of min. 250 TR at site condition with VFD, suitable for operation comprising of the following complete as per specification & Data Sheet. (All the details remain same as Water Cooled Screw Chilling Machine)	1	Each				
3	Supply, Installation, testing & commissioning of AHRI certified Air cooled screw chilling machines having minimum capacity of min. 250 TR at site condition with VFD, suitable for operation comprising of the following complete as per specification & Data Sheet. (All the details remain same as Water Cooled Screw Chilling Machine)	1	Each				
4	SITC of Anti Fouling Condenser System for 4# Chillers (2# present and 2# in the future), the Common Skid for the required number of chillers shall include 7" Touch Screen Graphical PLC, one injection/collection pump, motorized valves and complete with all accessories and Low side activities of piping connections from Ball traps to Ball collectors and Chillers. The motorized valve shall give signals to PLC of their functioning and all process of injection and collection should be shown on the PLC while in operation. The Common Skid piping, Ball Trap to suit chiller capacity and chiller quantity.	1	Set				
5	<p>CHILLER PLANT OPTIMIZER as described below.</p> <p>a) Supply, Installation, testing & commissioning of CHILLER PLANT OPTIMISER (CPO) as per specifications and IO summary to control and monitor chillers and other auxiliary equipment in the plant room and as given below and to provide output in BacNet over IP. The cost to be inclusive of supplying & installing all necessary accessories as required to complete the installation. Inclusive all necessary sensors, cabling etc. complete as required.</p> <p>i) - Chillers of 250TR - 4Nos. (3# Water Cooled and 1# Air Cooled) ii) - Variable Condenser Water Pumps - 3 Nos. iii) - Variable Primary Chilled Water Pumps - 4 Nos. iv) - Variable Secondary Chilled Water Pumps - 6 Nos (Zone A-3# & Zone B - 3#) iv) - Cooling Towers - 3 Nos. v) Twin Pump Pressurisation Unit with Expansion tank & automatic water makeup - 1 Set</p> <p>b) Supply of the Central Control Stations consisting of Operator Workstation Intel i7 +Processor(Latest Technology) with min 1 TB HDD, min 16 GB RAM, 2 GB Enhanced graphic Card, DVD Combo Drive, Ethernet Port with Dual Screen Ports. With Windows 10 License suitable to BMS software or any latest version of OS with Anti virus, complete as per Specification.Latest version of MS office package to be provided - 1 Lot.</p> <p>c) 24" colour monitor flat screen LED display with complete wall mounted /table mounted Brackets as per specifications- 1 Lot.</p> <p>d) Manufacturer to give a performance bank guarantee for a minimum period of 5 years for the Highside plant power consumption for the committed value)</p> <p>e) 2# Chillers will be installed in phase 1. The plant optimiser is having all the provision for accomdating the balance 2 chillers and other equipments in phase 11 with out any addition of modification of plant optimiser.</p>	1	Job				

Sl. No.	ITEM DESCRIPTION	QTY	UNIT	MATERIAL (RS)	LABOUR (RS)	RATE (RS)	AMOUNT (RS)
	<p>d) - SOFTWARES</p> <p>i) Supply, Installation, testing & commissioning of the Software for CPO System as per technical Specifications with minimum 3 nos. of web license. Supervisory controller should be directly Integrated with BMS server on BACnet over IP. Software shall have the capacity to accommodate hard points as per IO summary.</p> <p>ii) Supply of software interface with PUMPS / Cooling Towers' VFD (12 Nos.) for two way flow of data between CPM and panels. The price quoted shall include the necessary integrator required for integration and also the networking of all chiller panels. All VFD's will be integrated on Open Protocol over IP with CPM (VFD quantity are mention in IO Summary)- 1 Lot</p> <p>iii) Supply of software interface for Energy Meter (Upto 20 Nos.) for Chillers, Primary Pumps, Secondary Pumps, Condenser Pumps and Cooling Towers .The price shall include the necessary integrator / gateway required for integration. All EMs will be integrated on open Protocol over IP with CPM - 1 Lot</p> <p>e) Supply of equipment for CPO Stand alone Microprocessor based 32 Bit, UL Listed DDC Controllers with BACnet testing lab certified (BTL) & Network & Supervisory controller on BACnet/IP units for connecting all field DDC controllers as per the specifications for hard wired IO points. The contractor shall decide upon the number of controllers, depending on his Controller capacity. Expandable modules for Inputs/Outputs. Plug in relays , DDC shall be with all accessories & shall be suitable for future expansion. The above shall be housed in IP45, lockable ,Standard Power Supply, Secure MS powder coated Cabinets to be supplied along with the DDC Controller's Connecting Cables. The CPO should be seamlessly Integrated with BMS on Bacnet Over IP Protocol. Necessary cabling from field devices to plant Manager shall be included- 1 Lot.</p>						
	Total (C-)						
	Total (A + B + C)						

Kindly email your lowest quotation as above with your terms & conditions as well as applicable brochure / catalog, user list to only etenders@mgmuhs.com

<p>Date:</p> <p style="text-align: center;">Signature of Tenderer:</p> <p style="text-align: center;">Seal:</p>	Name:
	Designation:
	Email ID:
	Mobile No:
	Full Address: