



TATA MEMORIAL CENTRE

ADVANCED CENTRE FOR TREATMENT RESEARCH AND EDUCATION IN CANCER (ACTREC).

A GRANT-IN-AID INSTITUTE UNDER DEPARTMENT OF ATOMIC ENERGY, GOVERNMENT OF INDIA

Tender No:	TMC/ACTREC/ENGG/SP/ET-03/MGPS/RRU/2021
Tender Name	Supply, Installation, Testing & Commissioning of Medical Gas System for RRU building at ACTREC.
NAME OF THE AGENCY	

Financial Bid

S. No.	Item Short Description	Unit	Qty	Origin	Rate (Basic)	Amount
1.0	CENTRAL OXYGEN SUPPLY SYSTEM					
1.1	Supply Installation Testing & Commissioning of Main Oxygen Manifold for 10 + 10 Jumbo cylinders (without Cylinders) with Emergency Header Shutoff Valves,NRV ,(Should not consist Halogenated Materials), Pig tail pipes, Header Frame, Mounting brackets,Middle frame for right and left Bank with chain arrangement for holding the cylinders,Safety Valve(IMPORTED) with Valve arrangement with NRV to Change over from Main Manifold to Emergency manifold , as per Technical Secifications.	Set	1	Indegeneous		-
1.2	Supply Installation Testing & Commissioning of Fully Automatic Oxygen Control Panel/Station with no electrical power required for switching having a flow capacity of minimum 2000 lpm/ 120 m3 per hr. conforming to NFPA99 standard & UL listed.	Set	1	Imported		-
1.3	Supply Installation Testing & Commissioning of Emergency Oxygen Manifold 5+5 Jumbo cylinders (Without Cylinders) with Emergency Header Shutoff Valves,NRV ,(Should not consist Halogenated Materials),Pig tail pipes, Header Frame, Mounting brackets,Middle frame for right and left Bank with chain arrangement for holding the cylinders,Safety Valve(Imported) with Valve arrangement with NRV to Change over from Emergency manifold to main Manifold	Set	1	Indegeneous		-
2.0	CENTRAL NITROUS OXIDE SUPPLY SYSTEM					
2.1	Supply Installation Testing & Commissioning of Main Nitrous Oxide Manifold for 2 + 2 Jumbo cylinders (Without Cylinders) with Emergency Header Shutoff Valves,NRV , Pig tail pipes, Header Frame, Mounting brackets,Middle frame for right and left Bank with chain arrangement for holding the cylinders,Safety Valve with Valve arrangement with NRV to Change over from Main Manifold to Emergency manifold , as per Technical Specifications.	Set	1	Indegeneous		-
2.2	Supply Installation Testing & Commissioning of Fully Automatic Nitrous Oxide Panel/Station with no electrical power required for switching having a flow capacity of minimum 500 lpm/ 30 m3 per hr. conforming to NFPA99 standard & UL listed	No.	1	Imported		-
2.3	Supply Installation Testing & Commissioning of Emergency Nitrous Oxide Manifold 2 Jumbo cylinders (Without Cylinders) with Emergency Header Shutoff Valves,NRV ,(Should not consist Halogenated Materials),Pig tail pipes, Header Frame, Mounting brackets,Middle frame for right and left Bank with chain arrangement for holding the cylinders,Safety Valve(Imported) with Valve arrangement with NRV to Change over from Emergency manifold to main Manifold	Set	1	Indegeneous		-

S. No.	Item Short Description	Unit	Qty	Origin	Rate (Basic)	Amount
3.0	Supply, Installation, Testing, Commissioning of as per NFPA 99 Level 6020 Medical Grade Gas distribution piping manufactured from phosphorus deoxidized non arsenical copper to BS EN 1412:1996 grade CW024A manufactured to metric outside diameters having mechanical properties in accordance with BS EN 13348:2008-R250 half hard for sizes up to 54 mm or BSEN 13348:2008-R290 for larger sizes in ready made built up trenches as per applicable standard, open execution on internal / external walls, in vertical shafts, above false ceilings as also inside removable trunking, in walls by chasing cutting complete with factory made fittings such as tee/ elbow/ crossover/ wall sleeves etc., complete with vertical & horizontal supports and termination at both ends, colour coded painting etc.			Indegenous		-
3.1	Copper Pipe - 12 OD X 0.7 mm thick	Rmt	360			-
3.2	Copper Pipe - 15 OD X 0.9 mm thick	Rmt	2350			-
3.3	Copper Pipe - 22 OD X 0.9 mm thick	Rmt	1800			-
3.4	Copper Pipe - 28 OD X 0.9 mm thick	Rmt	700			-
3.5	Copper Pipe - 42 OD X 1.2 mm thick	Rmt	320			-
3.6	Copper Pipe - 54 OD X 1.2 mm thick	Rmt	280			-
4.0	Supply, Installation, Testing, Commissioning of Medical Gas Isolation valves , bare on line, NFPA 99 compliant, High tensile bronze/ brass 4 bolt bronze body double seal union ball type with TFE/ Viton seal 400 psig isolation valves with K type pipe stubs-Medical Grade Copper pipe for fixing in the Floor Local Zone Valve box, Area Valve Boxes, Bare for wards.			Imported		-
4.1	1/2" (for 15mm OD Tube)	No	316			-
4.2	3/4" (for 22mm OD Tube)	No	19			-
4.3	1" (for 28 mm OD Tube)	No	12			-
4.4	1-1/2" (for 42 mm OD Tube)	No	6			-
4.5	2" (for 54 mm OD Tube)	No	4			-
5.0	Supply, Installation, Testing & Commissioning of Medical Gas Distribution Zone / Area Valve Box , NFPA 99 compliant, for local isolation of service distributors on floor, factory made in corrosion proof enclosure with hinged temper proof door in 18 swg 1 coat of surface tolerant primer & 2 coat of polyurethane with marine grade heat resistance thickness having opaque door with pull ring & gauge window complete with gas labels & pressure/ vacuum gauges.			Imported		-
5.1	2 Gas Service	No	7			-
5.2	3 Gas Service	No	3			-
5.3	4 Gas Service	No	2			-
6.0	Supply, Installation, Hook up, Testing, Commissioning Medical Gas Plant Central Alarm Panel in Touch Screen , NFPA 99 compliant, located in MGPS building to give centralized view of a. Air plant. b. Vacuum Plant c. Oxygen & N2O manifolds, etc. It shall monitor a. Med Ox b. N2O, c. Med Air d. Med Vac e. N2O. The factory built panel shall be wall/ floor mounted mounted in corrosion proof enclosure. The initiating signal shall be dry contacts/Ethernet. The status indicators shall be Power On & Normal, System Fault, Each service status, self test, Mute for 80 dBA Audible & Visual alarm, 20 CHR 2 line alphanumeric text, field programmable with scroll button. For individual service with touch screen panel showing individual gas label in colour code, service parameters, dry contacts for Normal-High-Low etc complete with structural supporting. As per tender technical specifications	Set	1	Imported		-

S. No.	Item Short Description	Unit	Qty	Origin	Rate (Basic)	Amount
7.0	Supply, Installation, Testing , Commissioning Area Alarm Panel Touch screen, LCD microprocessor based, NFPA 99 compliant, located in each wing of each floor, to give view of services of a. Med Air. b. Med Vacuum c. Med Oxygen d. Med N2O e. Instrument air. The factory shall be panel shall be NFPA 99 compliant, floor mounted mounted in corrosion proof enclosure. The gas labels shall colour coded by gas type-service parameter-unit - Normal/Alarm (Lo&Hi)-Location. Panel indicators shall be Power On & Normal, System Fault warning, Each self test, Mute for 80 dBA Audible & Visual alarm, field programmable complete with structural supporting. As per tender technical specifications			Imported		
7.1	2 Gas Service-LCD ALARM	Nos	7			-
7.2	3 Gas Service LCD ALARM	Nos	3			-
7.3	4 Gas Service LCD ALARM	Nos	2			-
8.0	Supply Installation Testing & Commissioning of Gas Outlets Surface Mounted with Matching Adapter. The Outlet shall be NFPA99 standard			Imported		-
8.1	Oxygen	Set	143			-
8.2	N2O	Set	5			-
8.3	Air 4	Set	13			-
8.4	Vacuum	Set	143			-
9.0	SUCTION AND OXYGEN THERAPY PRODUCT					-
9.1	Supply, Installation, Testing, Commissioning of Oxygen flow meters with humidifier bottle BPC complying with ISO 15002:2008 range of 0-15 LPM, 3-5 psig humidifier setting	Set	132	Indegeneous		-
9.2	Supply, Installation, Testing, Commissioning of ward Vacuum Unit complying with ISO100793 :2000 consisting of 0-760 mbar vacuum regulator, vacuum filter & 1000 ml vacuum collection jar made from polycarbonate/ polysulphone material.	Set	132	Indegeneous		-
9.3	High Pressure Tubing- Oxygen	Mtr	50			-
9.4	High Pressure Tubing-N2O	Mtr	40			-
9.5	High Pressure Tubing-Air4	Mtr	50			-
9.6	High Pressure Tubing-Vacuum	Mtr	160			-
9.7	Low Pressure Tubing-Vacuum	Mtr	270			-
10.0	COMPRESSED AIR SYSTEM					-
10.1	Supply Installation Testing & Commissioning of oil free air compressor of minimum 5 hp-2 nos (1working + 1 standby)suitable for Air Outlet @ 4 Bar , The Medical Air System Plant FAD capacity shall be minimum 485 LPM at 55 psig as per NFPA 99, Air cooled heatless Dryer - Duplex , NRV, silencer, air filter motor / starter etc complete with all respect. including Casting P.C.C concrete 150 mm raised foundation of 1:2:4 including cement grouting the proper size of foundation bolts, M.S base plates of pump motor, adjustable plates, etc complete with all related civil works & finishing the same to match . Electrical Starter and necessary cabling. Auto Drain Valve- for Air Receiver. The Medical Air System is a package unit skid mounted, pre-fitted and pre tested at manufacturer factory & in strict compliance with NFPA 99. The control panel should be UL/ETL listed. The Air quality delivered by the Medical Air System shall be as per Pharmacopeia standard.	Set	1	Imported		-
11.0	VACUUM SYSTEM					-

S. No.	Item Short Description	Unit	Qty	Origin	Rate (Basic)	Amount
11.1	Supply Installation Testing & Commissioning of Medical Vacuum System comprising of oil lubricated rotary vane pumps of minimum 1200 LPM-2 NOS (1 WORKING + 1 STANDBY) complying with NFPA 99 standard comprising with Bacterial filtration system-Duplex,NRV etc complete with all respect,Casting P.C.C concrete 150 mm raised foundation of 1:2:4 including cement grouting the proper size of foundation bolts,M.S base plates of pump motor, adjustable plates, excavation etc complete with all related civil works & finishing the same to match existing.The Medical vacuum system is package unit , skid mounted, pre-fitted & pre-tested at manufacturer factory in strict compliance of NFPA 99 norms. The control panel shall be UL/ATL /ETL listed.	Set	1	Imported		-
12.0	ELECTRICAL POWER/CONTROL PANEL & Cables					-
12.1	Supply Installation Testing & Commissioning of rated Design Electrical MCCB Power Control Panel Cubical Type for Air Compressors & Vac. Pumps with for all above MGPL Equipments./Services with one Nos spares feeder for each equipment.	Set	1	Indegeneous		-
12.2	Supplying, erecting & terminating XLPE armoured cable 4 core 6 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	Mtr	120	Indegeneous		-
12.3	Supplying, erecting & terminating XLPE armoured cable 4 core 10 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	Mtr	120	Indegeneous		-
12.4	Providing & erecting Hot dipped galvanized perforated type cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 150 mm width & 75 mm height complete with necessary coupler plates & hardware in approved manner.	Mtr	40	Indegeneous		-
13.0	BED HEAD PANELS Supply, Installation, Testing, Commissioning of Bed Head Panel Extruded Aluminum 3 mm thick sheet, duly rendered resistant to UV/ Chemical/ Corrosion/ Pollution resistant, while Surface mounted housing conforming to NFPA 99 standard complete with Rails, IV Pole,Document basket, Monitor tray.			Indegeneous		
13.1	Supply Installation Testing & Commissioning of Bed Head Panels Aluminium Diecast for Ward Beds -- complete with Electrical Modular Outlets 5/15 Amps - 4 Nos ,Telephone Outlet , LAN Outlet , Provison for Gas outlets- 2nos. & Nurse Call Switch	Set	119			-
13.2	Supply Installation Testing & Commissioning of Bed Head Panels Aluminium Diecast for ICU Beds - complete with Electrical Modular Outlets 5/15 Amps - 4 Nos, Telephone Outlet , LAN Outlet , Provison for Gas outlets- 3 nos & , Nurse Call Switch	Set	8			-
13.3	Supply Installation Testing & Commissioning of Bed Head Panels Aluminium Diecast for ICU Beds - complete with Electrical Modular Outlets 5/15 Amps - 6 Nos, Telephone Outlet , LAN Outlet , Provison for Gas outlets- 5 nos & , Nurse Call Switch	Set	4			-

S. No.	Item Short Description	Unit	Qty	Origin	Rate (Basic)	Amount
14.0	Supply,Installation,Testing,Hookup, Commissioning of Dummy runners will be of modular design and shall be made inextruded aluminium profiles, which can be assembled together to form each of different models catered for different applications. The lengths of the units are customizable to suit different requirements and can be joined to form extended lengths for multiple beds layout. The units will be of surface mounted type and the front covers shall be of modular design for ease of installation and maintenance on site. All screws or fasteners will be hidden for easy cleaning. Material :- Extruded Aluminium Grade:- ALU 6063 T5 Surface Finishing:-Powder Coating Color:-off-White (Standard) or as per decided by OIC-ES L X W X D :-Customizable X 200 mm X 65 MM or as required	Rmt	200	Indegeneous		-
15.0	Supplying and erecting iron, sheet metal work consisting of CRCA sheets, various sections of iron, plates, chequered plates, rods, bars, MS pipes, etc. for panel board or any other purpose with bending, cutting, drilling and welding complete erected at the position with necessary materials duly painted with one coat of red oxide and two coats of enamel paint to match the switchgears or as per directions by the authority.	kg	100	Indegeneous		-
Total Cost excluding of GST (A)						-

CMC						
1.0	Comprehensive Maintenance Contract for a period of 10 years to commence on exhaustion of DLP period (DLP period of 2 year after completion of project,)					
1.1	Comprehensive Maintenance Contract -1 st Year	Lot	1			-
1.2	Comprehensive Maintenance Contract -2 nd Year	Lot	1			-
1.3	Comprehensive Maintenance Contract - 3rd Year	Lot	1			-
1.4	Comprehensive Maintenance Contract - 4th Year	Lot	1			-
1.5	Comprehensive Maintenance Contract - 5th Year	Lot	1			-
Total Cost excluding of GST (B)						-

Cummulative Cost (A+B)						-
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NOTE:

1	The agency is requested to visit the site to know actual scope of work.
2	Rate shall be inclusive of packaging, insurance, transportation, levies charges or any other charges and exclusive of GST.
3	Bill will be settled as per actual measurement.
4	Agency will have to prepare detailed Design, drawing, Technical Data Sheet, plan of work & obtained approval before execution. Agency will have time bound work schedule for carrying out the work.
5	Agency will have guarantee of 2 years for all installation after completion of project.
6	Agency will have to maintain the installation by undertaking preventive maintenance on regular basis for smooth operation during defect liability period. Quarterly Service to be provided during defect liability period.
7	Payment will be released for consumed quantity on satisfactory completion on providing necessary certifications/documentation.
8	All above items of this schedule shall be standard make and approval to be obtained to before installation.
9	Civil work require i.e foundation, cut out, supporting etc. for the project is in a scope of contractor no additional cost will be given for the same.
10	No extra charges shall be paid on account of visits to site for maintenance or for attending the fault.

General guideline for CMC:

1	Monthly Service shall be done for complete set up and report submitted to the Engineering-In-Charge.
2	Response time in case of fault should not be more than 4 Hrs.
3	Agency shall visit the set up monthly and as and when required.
4	Agency will be entirely responsible for undertaking the maintenance as well as fault detection & repairs/rectification and finish the same in
5	6.Contractors are requested to note that this is a Hospital Site & service shall be rendered accordingly to maintain the system working for all 24
6	Payment shall be released against satisfactory completion of each quarter.
7	Agency is allowed to keep some spare parts at site for emergency replacement, however entire responsibility will be held with agency.
8	Agency will be responsible for performance of the system after replacement of spare parts.

S. No.	Item Short Description	Unit	Qty	Origin	Rate (Basic)	Amount
9	Rate shall be inclusive of packaging, insurance, transportation, levies charges or any other charges and exclusive of GST.					
10	Agency has to visit the site to know the actual scope of work before quote.					
11	Purchase order will be issue every year after successfully completed CMC for current year.					
12	Open up the electrical control panel, inspect for any blackening of contacts, loosening of connections, component condition etc. rectify if any abnormality is noticed.					
13	Maintenance of the system includes all accessories supplied and their spare parts required during a comprehensive warranty period of two years free of cost from the date of successful installation and satisfactory functioning of the system at the site					