

TENDER NOTICE

Date : 22.05.2021

Sealed quotation / tenders are invited for the following works from reputed Experienced Manufactures / Authorised Distributors.

Sr. No	Name Of Work
1	Supply Installation Testing And commissioning of PSA based Oxygen Generation Plant having Capacity of 40 M3 per hour at 5 to 6 bar pressure.

1. Blank Tender forms, site information, etc. will be available at Electrical Office between dates 22/05/2021 to 31-05-2021. Blank tender form may be download from KIMS website. (www.kimskarad.in)
2. Sealed tenders will be accepted at Electrical office in two envelopes on or before 02-06-2021 up to 3.00 pm (in one envelop tender and other envelope document). Tenders / Quotations may also be submitted to registrar@kimskarad.in.
3. The tender negotiation will be communicated to all bidders through email/SMS communication. Tenderer should be present on that day.
4. Krishna Institute of Medical Sciences Deemed to be University reserves the right to reject any or all Tenders without assigning any reasons.

**Sd/-
REGISTRAR
KIMSDU, KARAD**

TERMS & CONDITIONS

“Supply Installation Testing and commissioning of PSA based Oxygen Generation Plant having Capacity 40 M3 per hour at 5 to 6 bar pressure”

1. The rate(s) quoted should be strictly for free delivery at F.O.R. KIMSDU, Karad and will be valid and operative for Supply valid for one year.
2. All Taxes/ Duties/ Royalties charges payable on sales/transport/loading /unloading in vendor scope etc.
3. No extra charge for packing, forwarding and insurance etc. will be Paid on the rates quoted.
4. The rates should be quoted only for the items specified in the list of requirement and should be for the items of given special mark /Manufacture.
5. Rates quoted for item other than required Specification/mark/manufacture may not be considered. However, indigenous manufactures may quote their own makes provided the Specifications/mark/manufacture.
6. Where specification / mark/ manufacture are not specifying by this office, the rates should be quoted only for the first class and standard Quality only.
8. The tenderer should specify the name of the manufacturer for the Item quoted by him along with catalogue of the item.
9. The KIMSDU karad reserves right to accept or reject tender without assigning any reasons.
10. No separate agreement will be required to be signed by the successful Tender for the purpose of this contract for supply. Rates Tendered/offered in response to the concerned Tender Notice shall Be considered as acceptance of all above terms and conditions for Supply for all legal purpose.
11. The Tender should be neatly typed only on letterhead carry the name of supplier and the signature of the tenderer. No overwriting correction or erasures will be considered.
12. The rates quoted should be inclusive of all taxes, duties, surcharges, cess, freight, loading, unloading, insurance, road permits, packing, as applicable. No extra taxes will be given.
13. Orders once placed should be delivered within the given time period and item should be door delivered.
14. No extra charge for packing, forwarding and insurance etc. will be paid on the rates quoted.
15. The rates should be quoted only for the items specifies in the list of requirement and should be for the items of given special mark/manufacture only.
16. Rates quoted for items other than the required specification / mark / manufacture will not be considered.
17. Rates should be quoted as per the forms prescribed by the department and as per the requirement asked for.

18. Supplier may ensure the goods at his own cost to safeguard the delivery of such goods dispatched by him to the consignee; the kimsdu, karad will not be responsible for the damage or pilferage of goods during transit.
19. The tenderer should attached Scanned copies of **Certificate from the respective manufacture company indicating your firm as authorized dealer/supplier for their product, certificate of experience in the field of "Purchase and Installation of PSA Based onsite Supply Installation Testing And commissioning of PSA based Oxygen Generation Plant having Capacity 40 M3 per hour at 5 to 6 bar pressure."** valid license, proof of fulfilling the norms of , ISO & CE Certified specification if any, copy of dealership letter, licence for import, PAN No, GST No., **The supplier must have at least 10 years' experience of supplying such type of goods.**
20. The tenderers should give the guaranty / warranty for the period of not less than one year from the date of installation against any manufacturing defect.
21. The firm should have at least 100 installation in PAN India level of the same principal make whose oxygen generators is quoted in tender and at least 10 installation in Maharashtra.
22. The tenderers shall be bound to give assurance for undertaking the CMC after expiry of guarantee / warranty period.
23. The firm should have registered servicing & engineering unit close to KIMSDU, Karad.
24. The manufacturing company should have good track record with minimum 100 satisfactory performance report last 2 years.
25. Company must provide training for operation and maintenance of the oxygen generator for up to one week from date of successful testing and commissioning of the system at no extra costs.
26. The successful tenderers should install and commissioning the equipment at the site suggested by the office.
27. The tendering firm must be registered with the GST department The Tender should give the guaranty/warranty for the period of not less than one year from the date of installation against any manufacturing defect. The terms and conditions dully accepted and signed by the tenderer should attached with the Technical Bid.
28. The Financial Bid has to fill in prescribed format.
29. The specification are for one unit and must be provided on turnkey basis and includes any additional equipment material required for working on the site oxygen generator.

Company / Vendor Information

1.	Name of the Organization	
2.	Postal Address	
3.	Telephone / Fax /Email ID/ Mobile No. of the Organization / Firm.	
4.	Status of the Organization/Firm (whether Private or Public Sector undertaking or Sole Proprietor or Partnership or co-operative society etc.) The tender should attach a resolution passed by the Executive Body authorizing the specific officer / partner for signing the documents.	
5.	Certificate from the respective manufacture company indicating your firm as authorized dealer/supplier for their product	
6.	Certificate of experience in the field of "Supply Installation Testing And commissioning of PSA based Oxygen Generation Plant having Capacity 40 M3 per hour at 5 to 6 bar pressure.	
7.	Valid licence	
8.	Proof of fulfilling the norms of ISO & CE	
9.	ISO-9001, 10083 & 2008 Certified specification, if any	
10.	Copy of dealership letter	
11.	Licence for import	
12.	PAN CARD No.	
13.	GST No.	
14.	The firm should have at least 20 installation in PAN India level of the same principal make whose oxygen generators is quoted in tender And a least 10 installation in Maharashtra.	

Place:

Signature of Tenderer

Date:

Name of Tender with Seal of the firm.

General Specifications

Supply installation Testing And Commissioning of PLC and PSA based Oxygen Generator gas plant Having Capacity 40 M3/Hour with 5 To 6 Bar pressure with consisting of following features.

<p>1 Overview of functional requirements</p>	<ul style="list-style-type: none"> • Uses pressure swing adsorption (PSA) technology to produce medical oxygen 93%±3 from ambient air. • easy to install: preassembled and skid-mounted, or containerised. oxygen production monitoring. • control panel / user interface, with numerical and graphical values, as applicable. • on-site training for installation, use, and maintenance preferable. • remote support for installation, use and maintenance. life span of a minimum of 10 years; guaranteed by a letter from the manufacturer. alarm for low oxygen concentration. • alarm when automatic back-up engaged, as configured (e.g. secondary plant in duplexed parallel system or reserve cylinders from ancillary manifold). optional: remote monitoring feature. soft start or variable speed drive (VSD) compressor.
<p>2 Detailed requirements</p>	<ul style="list-style-type: none"> • Oxygen concentration monitor with +/- 1% accuracy; • continuous display of the oxygen concentration and pressure; • alarm when an oxygen concentration is lower than 90%; • function of purge of low concentration of oxygen, optional • continuous output flow to cover 100% of the oxygen demand; • continuous output pressure of 5 – 6 bar. A gauge or sensor located between the source and the line pressure control to monitor the output pressure; • alarm when the output pressure is < 4.5 bar • feed air compressor, either oil-free or filtered oil-injected or oil-lubricated rotary screw type: minimum 7.5 bars • external air dryer with capacity sized to manage compressor output.
<p>3 Control panel / user interface</p>	<ul style="list-style-type: none"> • Digital display, clearly visible in English oxygen production trending [Nm3/hour] output pressure system status, including current maintenance need cumulative hours of operation (digital or analogue meter). Audible and visual alarms for: high temperature; low/high pressure; low oxygen concentration (<90%); power failure; system failure; second/reserve source active; air dryer pressure dew point (>3°C)

4	Components	<ul style="list-style-type: none"> • Air compressor with air dryer and pre-filters with automatic drains; • Filter assembly to include: pre-filter (>5 micron); coalescing filter (0.1 micron); and, • coal filter (coal tower, alternatively activated carbon filter), as applicable. oxygen generator unit; • oxygen analyser for medical application; • oxygen tank (receiver/buffer tank) with bacterial outlet filter.
5	Standards, for the product performance	<p>Free Sales Certificate (FSC) favourable, provided by any of the following countries: Australia, Canada, Japan, USA and European Community (e.g. FDA and/or CE certificate given by a third certified party for the specific medical devices proposed.</p> <p>ISO 7396-1: Medical gas pipeline systems — Part 1: Pipeline systems for compressed medical gases and vacuum.</p> <p>ISO 8573-1: Compressed air – Part 1: Contaminants and purity classes.</p> <p>ISO 8573-2: Compressed air – contaminant measurement – Part 2: Oil aerosol content.</p> <p>ISO 8573-4: Compressed air – contaminant measurement – Part 4: particle content.</p> <p>ISO 5011: Inlet air cleaning equipment for internal combustion engines and compressors – performance testing.</p> <p>ISO 21969: High pressure flexible connections for use with medical gas systems.</p> <p>All pressurized vessels to be:</p> <ul style="list-style-type: none"> • designed according to PED or ASME VIII, or equivalent; • certified PED or ASME III, or equivalent; • cleaned according to ISO 15001, ASTM G93, or equivalent.
6	User and Maintenance training	<p>Manufacturer must indicate explicitly the following maintenance routines to match the dedicated staff capabilities within the health facility:</p> <ul style="list-style-type: none"> • Cleaning routines of the PSA plant considering the electrical safety precautions. • Cleaning routines for the filters, if applicable (i.e. reusable). • Testing of alarms. • Testing of operating pressures. • Testing of oxygen concentration. • Frequency of the recommended maintenance routines. • Safety precautions on management of oxygen. • Advanced maintenance tasks required that shall be carried out by a third-party trained technician authorized by the manufacturer.

Technical Bid

Supply installation Testing And Commissioning of PLC and PSA based Oxygen Generator gas plant Having Capacity 40 M3/Hour with 5 To 6 Bar pressure with consisting of following features.

Sr. No.	Description	Company / Model No.	Remark
1	PLC and PSA based onsite oxygen generator plant to produce 40 Cu.M/Hour i.e. it should produce of 135 to 140 cylinder per day of oxygen with purity of 93% to 95%. Oxygen produced should be medical grade and should be supplied through oxygen outlet at 5 to 6 bar pressure. Oxygen analyzer should be inbuilt into the plant. (Each Cylinder having capacity 7 M3)		
1.1	The onsite oxygen generator module should be zeolite molecular sieves based employing pressure swing adsorption technology with built in PLC control panel. Onsite oxygen generator should be provided as per ASME guideline and must be two skid mounted.		
1.2	The onsite oxygen generator should be complied as per ISO 10083 standard, ISO 7396-I, HTM 02-01, NFPA 99C. The oxygen quality produced should comply with European pharmacopeia and US Pharmacopeia. The gas outlet must bear following qualities.		
	Oxygen: 93% To 95%		
	Dew point: 75 ^o C		
	CO: <2 ppm (0.0002%)		
	Co2 <150 ppm (0.015%)		
	So2 - 0 ppm		
	No2 : 0 ppm		
	Oil :< 0.1 mg/m3		
1.3	HMI Touch screen panel should be at least 4 inches. The oxygen generator must display:		
	a) Purity and pressure		
	b) Oxygen alarm facility for		
	Process cycle failure		
	Low oxygen pressure		
	Any malfunction		
	Service reminders.		
	c) Operation hours		
	d) Maintenance schedule		
	The onsite oxygen generator module should have inbuilt in oxygen analyser that includes.		
	a. Regulated pressure system		
	b. Digital display.		
2	Air System		
2.1	The entire system should be consisting of two skids		
	Skid 1 Should be: Air compressor		
	Skid 2 Should contain Air receiver tank, refrigerated air dryer with all suitable filter, bacteria filter, and oxygen generator as well as oxygen tank.		

2.2	Compressed air and oxygen piping:		
2.3	Refrigerated air dryer should be compatible with oxygen generator with following features (separate i.e. detailed catalogue of dryer, as well as compressor should be attached with the tender)		
	a) Constant dew point +3o C		
	c) Comply with quality control standards ISO 8573		
2.4	Filtration system for compressed air should be compatible with module.		
	a) Filtered air quality to the oxygen generator should conform to ISO 8573 class 1/4/1.		
	b) Filtration grade of at least 3 stage filtration system of 5 micron, 1 micron and 0.01 micron.		
	c) The ambient temperature of compressed air should be 10o to 40o C.		
2.5	Oxygen outlet should be equipped with particle filtration and bacteria filtration.		
3	Oxygen surge tank: The oxygen generator should be supplied with oxygen surge tank with working pressure of 5 to 6 bars. It should be fabricated out of heavy thick MS sheet and should be fitted with pressure gauge to display pressure in surge tank.		
4	Electrical Control Panel: Providing and fitting one mains electrical control panel as per oxygen generator module. Control panel consisting of all MCBs, switches, connections to gas plants as well as control switches. The control panel should be compatible with oxygen generator.		
5	Auto change over manifold: Providing and fitting of one automatic change over system/ Panel to control the supply of oxygen at 5 to 6 bar produced by PLC based oxygen generator and supply the oxygen to pipelines of the hospital. If pressure drops in supply of oxygen from oxygen generator to oxygen cylinder and should also be automatically changed over to oxygen generator from oxygen cylinder when the pressure increases in oxygen supply tank of oxygen generator.		
6	Alarm System: Providing and fitting of new Medical Gas alarm system with audio and visual alarm system.		
7	User List:		
	1. The Manufacturing company should provide minimum 3 user list, whether it is supplied by manufacturer or any dealer with order copies without price.		
	2. Satisfactory reports for last two quarters should be submitted for those users.		
8	You can attach Other project list details.		
9	If any additional Specification and additional future you can attach details herewith.		
10	United states Pharmacopeia approval for Medical use of Oxygen.		
11	Air Compressor - Maintenance free screw compressor with multistage oil filter required.		
12	Refrigeration dryer- Provide for remove moisture from compressed air and to make it dry to increase life of molecular sieves in oxygen unit.		

13	Utilites Consumptions : using Veriable Frequency Drive		Kw
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FINANCIAL BID

Sr. No.	Description	Amount	GST	Gst Amount	Total Amount
1	Supply installation Testing And Commissioning of PSA based Medical Oxygen Generator gas plant Having Capacity 40 M3/ Hour 5 To 6 Bar pressure with full double compressor arrangement and fully automatic operating unit with PLC and Veriable Frequency Drive all complete.				
TOTAL AMOUNT					
Note - Prices are include of GST/ Transportation at actual Site/ Insurance/ Material Loading Unloading etc.					

Approved Make

- 1) Air Compressor - Atlas Copco/ Elgi.
- 2) Refrigeration Air Dryer - Fruilar
- 3) Pneumatic valves & solenoid valves - Rotex
- 4) Control Panel Switchgears - Legrand
- 5) Molecular Sives - Uop- Usa
- 6) Activated Alumina - Uop - Usa.
- 7) Oxygen Flowmeter - Flowstar
- 8) Pressure Switch - Danfoss.
- 9) Oxygen analyzer sensor - Citi – Uk
- 10) PLC controller – Siemens/ Schneider
- 11) VFD – Siemens/ Delta/ ABB

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