प्रदेश सरकार
सुदूरपश्चिम प्रदेश
सामाजिक विकास मन्त्रालय
स्वास्थ्य निर्देशनालय
जिल्ला अस्पताल दार्चुला
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मिति :२०७८।०१।२८

बिषयः दररेट माग गरिएको सम्बन्धमा ।

उपरोक्त बिषय सम्बन्धमा हालको कोभिड १९ को महामारीलाई मध्यनजर गर्दै यस जिल्ला अस्पताल दार्चुलाकोलागि बिशेष परिस्थितिमा जतिसक्दो चाँडो **यसैसाथ सँलग्न Specification अनुसारको PSA Oxygen Generator Plant** खरिद गर्नु पर्ने भएकोले उक्त अक्सिजन प्लान्ट को यस जिल्ला अस्पताल दार्चुलामा **Supply,Delivery,Installation,Testing and Commissioning** कार्यकोलागि सम्बन्धित आपूर्तीकर्ता फर्महरुबाट ३ दिन भित्र यस जिल्ला अस्पताल दार्चुलाको इमेल ठेगाना darchulahospital@gmail.com मा दररेट पेश गरि दिन हुन सम्बन्धित सबैको जानकारीकोलागि यो सूचना प्रकाशित गरिएको छ ।

(डा. आदर्श लिम्बु)
नि. मेडिकल सुपरिटेन्डेन्ट
नि.मेडिकल सुपरिटेण्डेन्ट

Supply, Delivery, Installation, Testing & Commissioning of PSA Oxygen Generator Plant

S.No.	Proposed Specifications	Bidders Compliance Data		
		Yes/ No	Page no. in catalogue	Remarks (if any)
Manufacturer :				
Brand :				
Type / Model :				
Country of Origin :				
1.	**Description of Function**			
	A PSA Oxygen Plant is installed to supply uninterrupted high quality medical oxygen through central medical gas pipeline system to hospital facility. The oxygen can also be filled in cylinders through a high pressure filling booster compressor for emergency back-up and ambulance uses.			
1.1	The plant consists of Screw type Air Compressor, Refrigerated air dryer, Air receiver tank, Oxygen buffer tank, a series of modules of two adsorption vessels, micron filters, bacteria filter, flowmeter, controls etc.			
1.2	The Oxygen Generation plant should be capable of continuously producing 3.4 Nm3/hr at 95±1% oxygen purity and at 5 bar outlet pressure as per altitude and ambient temperature and relative humidity of the location. Altitude, temperature range and humidity of the location must be mentioned in the bid datasheet and the generator and its equipment and accessories must be designed for the same.			
2.	**Oxygen Concentrator**			
2.1	Oxygen generator shall operate on (PSA) Pressure Swing Adsorption Principe with series of modules of two adsorption vessels. Must be heavy duty medical Oxygen gas generators plant able to operate to work 24/365 days. Generator capacity should be not less than 3.4 Nm3/hr. at 5 Bar outlet pressure and Oxygen Purity should be 95±1%.Must have non-corrosive materials, like aluminium and stainless steel, as standard for all process components			
2.2	Oxygen sensor should be Zirconium oxide Sensor. Oxygen dew point: - 40°C The valves must be self lubricating type.			

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2.3	Must be robust and compact system able to fit in small space of hospital. Column vessels should be manufactured according to pressure equipment directive with handhole. Adsorbent material must be of highest quality, long-life molecular sieve [ZEOLITE] with industry leading energy air factors and warranty for ZEOLITE must be 10 years and commitment of the same shall be provided by the manufacturer.			
2.4	High-class process dual filter should be fitted to ensure inlet and outlet gas quality. It should be capable for automatic, mechanical condensate drain. Should have Pre filter, micron filter & Bacteria filter for oil dust removal of less than 0.01 mg/m3 ensuring the required air quality standard of ISO 8573.1:2010.2.4.1			
2.5	Oxygen Generator must be according to standard European pharmacopeia and compliances with ISO standards.			
3.	**Monitoring & Controls**			
3.1	It should have display control with text display, numeric keys and alarm indications.			
3.2	It should have inbuilt oxygen monitor.			
3.3	It should have inbuilt purity control valve, which should purge the oxygen outside purity limit.			
3.4	It should be ethernet compatible.			
3.5	It should be remotely monitorable.			
4.	**Air Tank**			
4.1	It should have one set of Air Tank made of Mild Sheet having food grade epoxy coating of capacity 150 L (tested to min. 11 Bar) with inlet and outlet valves, safety valve, pressure gauge and auto-drain valve.			
5.	**Oxygen Buffer Tank**			
5.1	It should have one set of Oxygen Buffer Tank made of Mild Sheet having food grade epoxy coating of capacity 150 L (tested to 11 Bar) with inlet and outlet valves, safety valve, pressure gauge and auto-drain valve.			
6.	**Air Compressor**			
6.1	It should be Rotary Screw type and Air-Cooled air compressor of motor capacity not more than 5.5/7.5 Kw as per altitude. Model and motor capacity to be mentioned in the bid. Built-in Oil Separator and Air Filter. Controls should be Suction Throttle valve type with On-off line control & Motor stop-restart control.			

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6.2	Filled lubricating oil should be Mineral Oil. It should have Digital Display indicating Failure, LCD display. Records atleast 24 hrs. operation data. It should have automatic safety shutdown for Main Motor overload Inverter trip (Fan Motor overload) Aircnd outlet high discharge air temperature Air oil separator outlet high discharge air temp. High oil case pressure Phase reversal and phase failure.			
6.3	Digital control should show discharge air pressure, Operating hours Discharge, air temperature I, Control settings, Unload counter, Load factor, Error code			
6.4	Noise Level (at 1.5 mtr in front) should not be more than 65 dB (A).			
7.	**Air Dryer**			
7.1	There should be one set of refrigerant type suitable capacity air dryer with dew point of +3 degC. Micro Processor based. It should be with level sensing auto drain valve, Integral Heat Exchanger, Eco Friendly Gas only.			
7.2	It should have a minimum flow of 100 m3/h.			
7.3	It should have clear, easy visible Control Display. The control panel, should be user-friendly and should allow for the monitoring of the operating status at a glance. The dewpoint should be clearly displayed with a 10 point LED indicator. Easy LED-Display for the operating mode, an alarm and the function of the fan and adjustable dewpoint alarm.			
8.	**Filtration System**			
8.1	Air quality after air dryer and filters should meet the ISO 8573.1:2010.2.4.1. Dew Point + 3°C. Filtration Grade 0.01 micron.			
8.2	It should consists of at least following for filteration : 1 set of Prefilter for filtration level upto 1 micron with auto drain. 1 set of Microonfilterof 0.01 micron level with auto drain. 1 set of Bacterial / Sterile Filter.			
9.	**Oxygen Cylinder Filling System**			
9.1	The system should consist of High Speed High Pressure Oil Free Compressor and High pressure flexible hoses with cylindrical connector. It should work on rocking cylinder compression technology which enables to fill cylinders efficiently and safely.			

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9.2	It should have flow rate upto 20 LPM at 2000 psi and suction pressure of 6-20 psi. It should have maximum power consumption of 1 KWH.			
9.3	It should have high compression ratio, compact and mobile.			
9.4	It should be ISO13485 and CE Certified. Original manufacturer authorization is required directly from the manufacturer.			
10.	**Main Electrical Control Panel**			
10.1	Fully automatic electric Control Panel consisting of all the MCCB's, MCB's, Digital Timer Phase Sequencer, automatic Hi/Low voltage control relay and Switches etc must be provided. The panel should be provided with all Ampere Meters, Voltmeters for visual indication of the electric supply and LED indicators for each phase. All the main components and equipment of oxygen generator plant should be integrated and power controlled through one control.			
10.2	It should be fully complies and meets with the requirements of the standards.			
11.	**Quality Standards**			
11.1	Complete oxygen generation system must be classified as class IIb medical device and must be CE certified and manufacture should provide the valid quality control certificate of the same & Copy of valid EN ISO 13485:2012, Valid ISO 9001:2008, ISO 14001:2004/2007, PED97/23/EC Module B+D, MDD97/42/EC(Medical Device Directive), CE Certificate for Oxygen Generator System, Air Compressor and Air Dryer to be provided along with bid documents. Oxygen Generator should comply with European Pharmacopia and ISO 10083.			
12.	**Authorization**			
12.1	A valid manufacturer authorization letter is required for Oxygen Plant, Air Compressor, Air Dryer and Filling Booster.			
13.	**Operational Conditions**			
13.1	The system offered should be designed to operate normally under the conditions of purchaser's specific place. The condition include Power Supply, Climate, Temperature, relative humidity , altitude-M.A.S.L etc.			
14.	Standard & Safety Requirements			

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14.1	Bidder must submit the valid quality and standard certificates as asked in technical specifications along with bid documents.			
15.	**Accessories, spares and Consumables**			
15.1	All the standard accessories, consumables and parts required to operate the equipment, including all standard tools, cleaning and lubricant materials to be included in the offer.			
16.	**User Training**			
16.1	Must provide user training (including how to use and maintain the equipment).			
17.	**Warranty**			
17.1	Comprehensive warranty for 2 years except consumables from the date of installation and 3 years service warranty thereafter.			
17.2	Price of AMC and CMC (both) for next 3 years should be compulsorily quoted separately in a different sheet.			
18.	**Maintenance Service During Warranty Period**			
18.1	During the warranty period supplier must ensure planned preventive maintenance (PPM) along with corrective/ breakdown maintenance whenever required.			
18.2	Manufacturer shall commit the availability of spare parts and consumables and accessories for at least 10 years.			
19.	**Installation, Testing & Commissioning**			
19.1	The bidder must arrange for the equipment to be installed, tested and commissioned by certified or qualified personnel; any prerequisites for installation to be communicated to the purchaser in advance, in detail.			
20.	**Experience**			
20.1	Bidder must have successfully done similar works in at least 3 hospitals in last 3 years in Nepal.			
21.	**Documentation**			
21.1	The bidder should submit a valid manufacture authorization from the original manufacturer for all the equipment's and accessories offered.			
21.2	The bidder should submit the original brochure or e-copy for each and every equipment's and accessories.			
21.3	User (Operating) manual in English.			
21.4	Service (Technical / Maintenance) manual in English.			
21.5	List of important spare parts and accessories.			
21.6	Certificate of calibration and inspection from factory.			

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21.7	Operating manual, Service manual, Circuit diagram, other detail drawings, PPM schedules, Spears parts catalog, Guarantee / warranty Certificate, Performance Test Certificate should be provided at the time of installation & in English Language, Certificate of calibration and inspection from factory.			

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