

No.	TECHNICAL SPECIFICATIONS.	Fill Your specifications
1	Requirement:	
a	Complete Turnkey job for Supply & installation of one vertical storage tank of 10 KL capacity of working pressure of 16-18 kg/cm ² with storage capacity of approx 8,700 cum oxygen gas in one tank with cylinder filling facility.	
b	Supply of Medical Grade Liquid Medical Oxygen as per IP: 2018 (including transport up to any Govt. Medical Institution and including maintenance of Cryogenic storage tank)	
2	Terms & conditions:	
a	Periodical check-up and maintenance of LOX tank by technician shall be provided from vendor side.	
b	Immediate refilling the storage tank is to be done from vendor side as and when required.	
c	Must have dedicated tanker vehicles for transportation of liquid Oxygen	
d	Civil works as per requirement to be done from vendor side for foundation of storage tank.	
e	Connection and installation up to existing pipeline manifold (approx 75meter).	
f	Time of completion – 30 days for installation of storage and supply of Liquid oxygen shall be within 12 hours.	
3	Mode of measurement of Liquid Medical Oxygen:	
	By weight of tanker. The conversion factor of 1 k.g. of liquid oxygen = 0.770 cum/ 1 Ltr of liquid oxygen =0.877cum.	
4	Warranty of equipment: (i.e. storage of tank and other related equipment) Five year from the date of commissioning of the project and	
5	Purity of Medical grade liquid oxygen: The purity of liquid oxygen should be 99% or more.	
6	Technical Specification of Cryogenic Tank:	
I	Capacity - 10KL + 10%	
II	Alarm VIE (Vacuum Insulated Evaporator)	
III	Low Content Level (Audio Visual)	
IV	Low Pressure alarm (Audio Visual) and back up at manifold room.	
V	Alarm VIE low pressure alarm (Audio Visual) low pressure in pipeline system.	
VI	The Tank/Vessel should have two separate liquid withdrawal valve with dual parallel regulator system for uninterrupted supply, allowing lines to be sub-sequentially closed for maintenance / repair.	
VII	Three way gauge valve for isolation of line pressure with manual control.	
VIII	The vessel should be maintained in such a way as to keep natural evaporation rate less than 1% per day.	
IX	The vessel should be double walled insulated with MAWP (Max allowable working pressure: 16 - 18 kg/cm ² as per ASME/EN/Equivalent)	
X	The vacuum insulated tank (VICC) should consist of an inner vessel made of stainless steel, designed for a positive pressure at cryogenic temperature and an outer vessel made of carbon steel, designed for vacuum. The inner vessel should be supported on the outer vessel. The in between space is filled with perlite powder to sustain cryogenics temperature and vacuum.	
XI	The vessel is to be supported with valves, devices, inbuilt vaporizer, liquid level gauge and pressure gauge on the front side at easy readable height. Both the gauges are duly calibrated.	
XII	The atmospheric vaporizer should be of suitable alloys to be operated at low pressure for continuous supply of oxygen gas. The vaporizer will be put in tandem with the main vessel, with the function of converting LMO into gaseous form for onward supply.	
XIII	Should provide ambient air heat exchanger which is able to vaporize 150 - 200Nm ³ /Hr LMO into vapour.	
XIV	The Regulator to be installed should be a pressure regulator, made of cast steel/(powder coated), with bonnet and trim parts which are able to maintain the required flow.	
7	Space for installation of storage tank of Medical Grade Liquid Oxygen shall be provided by the purchaser.	
8	Allocated space should be 9M (W) X 16 M (L) at ground level and should be accessible for smooth movement of LMO tanker from/to the site.	
9	Additional Technical Specification (for Cylinder filling)	
i	Air Heated Vaporiser : 300NM ³ or more	
ii	Vaporizers convert the liquid oxygen into a gaseous state	
iii	Liquid Oxygen Pump with Starter : 5.5Kw (7.5HP)	
iv	Cylinder filling manifold & pipeline : 12 nos x 2 sides	