



SPECIFICATION OF MEDICAL OXYGEN PLANT (P/N : DEB-MOP-1000-000)

I) General Performance Specification			
Sl. NO.	Data/Component	:	Description
1.	Product	:	Onsite Medical Oxygen Generating Plant
2.	Oxygen enriched air flow	:	300 lpm(18 cu.m/hr)
3.	Oxygen pressure	:	4 - 5 kg/cm ² (g)
4.	Design Pressure	:	11 kg/cm ² (g)
5.	Temperature	:	10 ⁰ C – 35 ⁰ C
6.	Oxygen Purity	:	93+3%
7.	End Connection	:	½" BSP
8.	Oil Content	:	0.1mg/m ³
9.	Dew Point	:	- 50 ⁰ C
10.	Standard	:	ISO 100083 : 2006 (E)
II) Air Compressor			
1	Compressor capacity (Press./Flow)	:	7bar g/205 cfm
2.	Type	:	Lubricated Screw Compressor
3.	Make	:	Elgi/Atlas Copco / Eqv
4.	Power	:	30 kW
5.	Nominal Power Supply Conditions	:	380V/400V(+/-10 %), 50 Hz (+/-5%), 3 Phase
6.	Type of motors (main drive & fan drive)	:	Squirrel cage induction motor TEFC & Cooling fan with integrated motor
7.	Insulation and protection of main motor	:	Class F & IP 55
8.	Frame size / mounting type	:	225S/B35
9.	Type of Starter for main motor	:	Automatic Star Delta
10.	Maximum fan motor rating per fan x no. of fans.	:	1.05 kW x 1
11.	Rated speed of fan motor	:	1280 rpm
12.	Safety valve set pressure	:	14 bar (g)
13.	Noise level	:	69 dB (A)
14.	Electricals		
	Incoming fuse rating	:	100A
	Incoming cable size (Armoured) Copper	:	3 ½ C x 35 Sq. mm
	Incoming cable size (Armoured) Aluminium	:	3 ½ C x 50 Sq. mm
	Earth cable size Copper	:	6 Gauge
	Power cabel gland hole diameter	:	35 (1.377) mm(inches)
15.	Weight	:	1110 kg (Approx.)
III) Air Dryer			
1.	Dryer Type	:	Heatless Desiccant Dryer
2.	Make / Model	:	Dryspell Plus 200

3.	Dew Point	:	<-40 °C
4.	Working pressure	:	7kg/cm ² (g)
5.	Test Pressure	:	16 kg/cm ² (g)
6.	Nominal Inlet Flow SCFM	:	200 CFM
7.	Pre-filter rating	:	0.01 micron (Coalescer)
8.	After-filter Rating (inbuilt)	:	25 Micron (within the diffuser screen or Compactor plate)
9.	Cycle Time	:	4 Min
10.	Maximum Inlet Air Temperature	:	38 deg C
11.	Power Consumption	:	12 Watt Max
12.	Electric Supply	:	100-240 V AC 50/60 Hz 1 Ph
IV) Filter			
1.	Micron – Coarse Filter	:	5 micron
2.	Micron rating – Fine filter	:	1 micron
3.	Filtering media	:	Borosilicate Element
4.	Efficiency	:	99.9%
5.	Utilities	:	Auto drain valve
V) Activated Carbon Filter			
1.	Micron rating	:	0.01 micron – particle
		:	0.003 mg/cu.m – Oil carryover
2.	Filtering media	:	Carbon
3.	Housing	:	Aluminum IS 63400
VI) Air Tank			
1.	Construction	:	IS 2825
2.	Capacity	:	1500 Ltr
3.	Drain	:	Manual drain
VII) Oxygen Generator			
1.	Make	:	Trident
2.	Capacity	:	Oxygen 300 LPM
3.	Inlet Air Pressure Max	:	7 kg/cm ² (g)
4.	Oxygen Pressure	:	4-5 kg/cm ² (g)
5.	Design Pressure	:	11 kg/cm ² (g)
6.	Oxygen Purity	:	93+3%
7.	Adsorbent	:	Zeolite based Molecular Sieves
		:	Size 1 to 1.2 mm
8.	Construction	:	IS 2825
9.	Tower Material	:	IS 2062
10.	Eq. No. of Cylinder per day	:	60
VIII) Product Gas Tank			
1.	Construction	:	IS 2825
2.	Capacity	:	1500 Ltr
3.	Drain	:	Manual drain
4.	Working pressure	:	7 kg/cm ² (g)
5.	Test Pressure	:	11 kg/cm ² (g)

IX) Controller			
1.	Type	:	PLC based system with colour HMI of size 3.5"
2.	Make	:	Trident
3.	Display parameters	:	
	• Oxygen pressure	:	In bar(g)
	• Oxygen purity	:	In (%)
	• Service reminders	:	No of hour running
		:	• Filters Replacement frequency
		:	• Bacteria filter auto clave frequency
4.	Sensors	:	• Inbuilt Oxygen sensor
		:	• Inbuilt pressure sensor
5.	Input voltage	:	85 – 265 V AC, 50 / 60 HZ.
X) Mounting Arrangement			
1.	Skid	:	• Air Compressor
		:	• Air dryer
		:	• Air Tank
		:	• Oxygen generator with Filters
		:	• Oxygen tank with bacteria filter
		:	• Booster Compressor
		:	• Aluminum piping/SS Hose for compressed Air lines
2	Piping	:	• Copper lines for oxygen
		:	Inbuilt manifold for secondary oxygen supply in case of power failure/ unit malfunction etc
3.	Manifold	:	Inbuilt manifold for secondary oxygen supply in case of power failure/ unit malfunction etc
XI) Oxygen Booster Compressor			
1.	Model	:	
2.	Capacity and Pressure	:	Two-stage, L-type, Water-Cooling
3.	Type	:	Oxygen
4.	Medium	:	5.5 kW
5.	Power Req.	:	415 V 50 Hz 3 Phase
6.	Electrical Supply	:	1300 kg
7.	Unit Weight	:	1300 kg
XII) Space Requirement			
1.	Installation Room Size	:	25ft (L) x 15ft (W) x 12ft (H)
2.	Total Power Req.	:	40 kW