

SPECIFICATIONS FOR MEDICAL GASES

1. Liquid Medical Oxygen (LMO)

Detailed technical specification for LMO –

- Vessel Capacity : Below 1000 litres
- Configuration – Vertical
- Operating pressure – 8-12 kg/cm²
- Should be a compact unit including vessel and vapouriser.
- Vessel should be of standard material and technology keeping in view of safety factors.
- Dimension of Vessel – Vendors are requested to visit/inspect the site so that the tank of requisite dimension can be provided by them to meet our daily consumption of approximate 70 type ‘D’ cylinder .
- Purity – 99 -100%
- Should not cause any damage to gas pipeline, anaesthesia machine and ventilators.
- Medical grade I.P.
- Certified safe for human use.

2. Compressed Medical Oxygen

- Certified pure 99-100%
- Certified safe for human use.
- Should not cause any damage to the materials of cylinders, Gas pipeline, Anaesthesia machine and ventilators.
- Medical grade I.P.

3. Nitrous Oxide.

- Certified pure 99-100%, in liquefied form.
- Humidity and other impurities zero percent.
- Certified safe for human use.
- Should not cause any damage to the materials of cylinders, Gas pipeline, Anaesthesia machine.
- Medical grade I.P.

4. Carbondioxide:

- Medical grade I.P.

- Certified safe for human use.
- Should not damage any instrument used with it e.g. Laparoscope etc.

Note: Common to all Gases

1. The firm should take responsibility to maintain color code of all medical gases cylinders including those belonging to the hospital.
2. The firm should take responsibility of routine checking/testing of all cylinders/vessels for LMO before filling.
3. The company's cylinders should be tested and certified safe by the department of explosives, having water capacity 47 litres. Pressure of full cylinders must be $140 \pm 5 \text{ kg/cm}^2$ while containing 7 cubic meter gas. Cylinder should be of good quality, painted with specified colour, and good condition of valve with good fitting with tail pipes of our gas plant, and with standard pressure regulators.
4. The firm having infra structure for manufacturing, filling and testing with good track record of medical gases (Compressed oxygen, LMO, N_2O) at large scale, based in Delhi and NCR.
5. The firm should have in-house facility for testing of gases. The firm should have full time chemist to operate the laboratory.
6. The supply of Medical Gases should be available round the clock as and when required.
7. The firm is bound to submit the test report along with each batch of supply.
8. The tenderers are bound to supply the store during the validity of tender at the approved rates. The validity of the tender will be for the period of one year from the date of finalisation of the tender. The rates quoted should be certified as the lowest quoted for any institution in India. If the price of any item is reduced due to any reasons during the validity of the tender he will intimate to this Directorate the reduced rates immediately
9. The firm should have adequate & efficient transport for supplying of Medical gases. There should be not be any interruption in supply.
10. The payment will be made after the receipt of gases and completion of all codal formalities. No advance will be made.
11. Quality control of gases must be strictly adhered to.
12. Vendor should ensure uninterrupted supply of medical oxygen to the hospital in case of failure of LMO.
13. Vendor should provide desired medical oxygen bulk 'D' type cylinder for the matrix of the manifold as a standby arrangement for liquid medical oxygen.