

# TECHNICAL SPECIFICATIONS

## BUBBLE CPAP MACHINE

### **1. Function:**

Continuous Positive Airway Pressure (CPAP) system to treat premature / new born babies with respiratory distress. Non-invasive method of delivering CPAP. Low flow Air and blender offering precise gas blending of high flow of 0~15 lpm and low flow of 0~3 lpm (for preterm).

### **2. Operational Requirements:**

CPAP generator where PEEP should be set by water column which can be adjusted externally. The device should include a heated humidifier, patient circuit, air / oxygen blender and patient interface of various sizes.

### **3. Humidifier:**

1. Should be Servo Controlled
2. Display of Airway Temperature & airway Humidity on screen.
3. Should have heater wire adapter, Airway Temperature & Humidity probe.
4. Have variable temperature depending on requirement.
5. Audio/visual alarms present on screen.

**4. Humidifier chamber:** Should be supplied disposable type auto feed valve mechanism for constant compressible volume to maintain CPAP pressure.

### **5. Patient Circuit and accessories:**

1. Should be supplied with disposable heater wire breathing circuit. Each Circuit must have Nasal Prongs, Headgear, infant Bonnets.
2. Pressure limiting valve (10 cm H<sub>2</sub>O) to prevent damage from occlusions.
3. PEEP generator with easy direct setting with CPAP from 2~12cmH<sub>2</sub>O.

### **6. Compressor and Stand:**

1. Medical Grade Compressor having low noise level and low vibration on sturdy lockable wheels.
2. Should have pressure gauge, electronic dryer and pressure regulator.

### **7. Air Oxygen Blender:**

1. Blender should provide precise mixing of air and oxygen with adjustable knob for FiO<sub>2</sub> from 21 to 100 %.
2. Two outlets - primary outlet 1-15 lpm (supply pressure at 50 PSI )
3. Operating temperature range 15 to 45 degree Celsius
4. FiO<sub>2</sub> accuracy : 2~3% of full scale
5. It should be supplied with Air and oxygen hose kit and pole mounting clamp

### **8. Safety:**

1. The entire system including blender, humidifier and compressor should be European CE or US FDA approved. (Valid certificate should be submitted in technical bid).
2. Recommended ambient temperature range 15 to 35 degrees Celsius.
3. Power Supply 230 volts, Supply frequency 50 or 60 Hz.

### **9. Scope of Supply to include with EACH machine:**

1. Air/Oxygen Blender with one set of hoses 1
2. Compressor on wheels 1
3. Patient Support Arm 1
4. Servo Controlled Humidifier 1
5. One set of reusable chamber with heater wire 1

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6. Patient interface one set 1
7. Head band 3 sizes from 0.5 kg to 4kg 1set
8. Nasal Prongs 5 sizes from 0.5 kg to 4kg 1set

**10.** Guarantee three years on complete unit including compressor, Blender and Humidifier after installation.

**11.** CMC: CMC shall be given @ 5 % of net rate (inclusive of Excise Duty & exclusive of VAT/CST etc.) plus service tax (as applicable) and yearly escalation of 5 % on last year's CMC price. The CMC may be awarded for five years (on yearly basis) after Guarantee period of three years.

**12.** Four preventive maintenance services are essential annually during guarantee and CMC period.

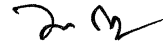
**13.** Installation will be done by the firm free of cost.

**14.** Service Network of Firm in Rajasthan is essential.

**15.** Demonstration of the Equipment may be taken if needed for final technical approval.

**16.** The company should submit technical compliance sheet along with make / model of the quoted item along with catalogue in technical bid.

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**Executive Director (EPM)**  
**Rajasthan Medical Services Corporation**  
**Ltd, Jaipur**