

Saans - next-gen non-invasive respiratory support for neonatal/pediatric patients – Technical Specifications

Application/Function:

- Respiratory support device that can provide CPAP, HFNC, and Resuscitation therapies
- For neonatal and pediatric patients
- In either Hospital or Transport settings (intra-hospital and inter-hospital)

Intended Patients:

- Neonatal and Pediatric

Device Dimension:

- 219 (L) x 212 (H) x 306 (D) mm;
- Approx. 5 kg for main unit

Device Input:

- Electrical input of 110-220V & 50-60Hz
- Recommended Input oxygen flow rate of ~10-40 LPM and ~0.3–4.0 Bar
- Oxygen source compatibility: 1. Central Oxygen line; 2. Oxygen cylinder; 3. Oxygen Concentrator (for bCPAP mode)
- Power consumption: 36 Watts

Device Output (Flow and Pressure):

- Flow: 2 to 60 LPM
- Pressure (CPAP mode): 2 to 12 cm H₂O
- PIP (Resuscitation mode): 5 to 40 cm H₂O
- PEEP (Resuscitation mode): 2 to 10 H₂O
- FiO₂: 21% - 100%
- Separate modes for CPAP, HFNC, and Resuscitation delivery

Output Accuracy:

- <2% Full-Scale Value

Compressor and Blender:

- In-built electronic flow generator/compressor capable of providing up to 60 LPM flow independent of oxygen input
- In-built electronic Air-Oxygen blender to deliver FIO₂ concentration of 21% to 100% with continuous monitoring and dynamic control

Parameter Control and Display:

- Digital control and display of Flow Rate – set and actual values
- Digital control and display of FiO₂ – set and actual values
- Digital control and display of PIP and PEEP (Resuscitation mode)
- Digital display of Pressure (CPAP mode)
- Integrated 8-inch LCD Display
- Parameter control with single touch knob
- External pressure control using PEEP valve or Bubble Jar options

In-built Sensors for measurement of:

- FiO₂
- Flow rate
- Pressure

Alarms:

- Audio and visual alarms for: 1. Hardware failure; 2. FiO₂ high/low; 3. Leakage; 4. Tube disconnect; 5. Flow high/low; 6. Pressure high/low

Unit Mounting:

- Trolley, Wall-mounted, Handheld

Battery Backup:

- In-built, rechargeable, Li-ion battery with back-up of 4-6 hours

Noise:

- Less than 60dB of sound during standard operation

Humidifier:

- Compatible with standard servo-controlled humidifier with heater wire and temperature probes for stationary/long-term use
- Trolley mounted using flat clamp

Operating and Storage Conditions:

- Operating temperature range: 0-45 degrees C
- Storage temperature: 0-50 degrees C

Trolley:

- Mobile trolley with mounting clamp and platform for device

Patient Interfaces:

- Compatible with standard patient interfaces including HFNC Circuit with heated wire, CPAP circuit with heated wire, Ram's cannula, high flow cannula

Certification:

- Manufacturer ISO 13485 certified
- India CDSCO registered