

Ventilator

SUPERVISOR :

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GROUP :

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INTRODUCTION :

A ventilator is a medical device that provides mechanical ventilation by moving breathable air into and out of the lungs, to deliver breaths to a patient who is physically unable to breathe, or breathing insufficiently. Ventilators are computerized microprocessor-controlled machines, but patients can also be ventilated with a simple, hand-operated bag valve mask.



Operation :

- Ventilator uses positive pressure to blow air, with additional oxygen as required by the patient through a tube into the patient's respiratory system.
- The air is warmed and moistened as it passes through the humidifier.
- Airflow into the mask over the patient's nose or mouth.
- Exhaled air flows away from the patient.

Uses :

- ❖ Strokes or head injuries.
- ❖ Asthma or chronic obstructive pulmonary disease.
- ❖ Acute respiratory failure syndrome.
- ❖ Sudden stop of blood.
- ❖ Septicemia.
- ❖ Pneumonia.
- ❖ Respiratory distress syndrome in newborns.
- ❖ Diseases that affect the nerves and muscles that control breathing.
- ❖ Covid-19



Components :

1. Support arm. 2. Controls.
3. humidifier. 4. Air hose.
5. Patient monitor. 6. Ventilator unit.
7. Medical grade air compressor. 8. Y-piece.

