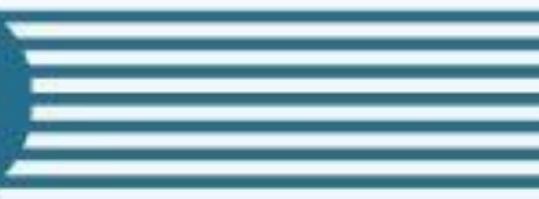


# الكلية التقنية الهندسية قسم هندسة تقنيات الأجهزة الطبية





### Ventilator

**SUPERVISOR:** 

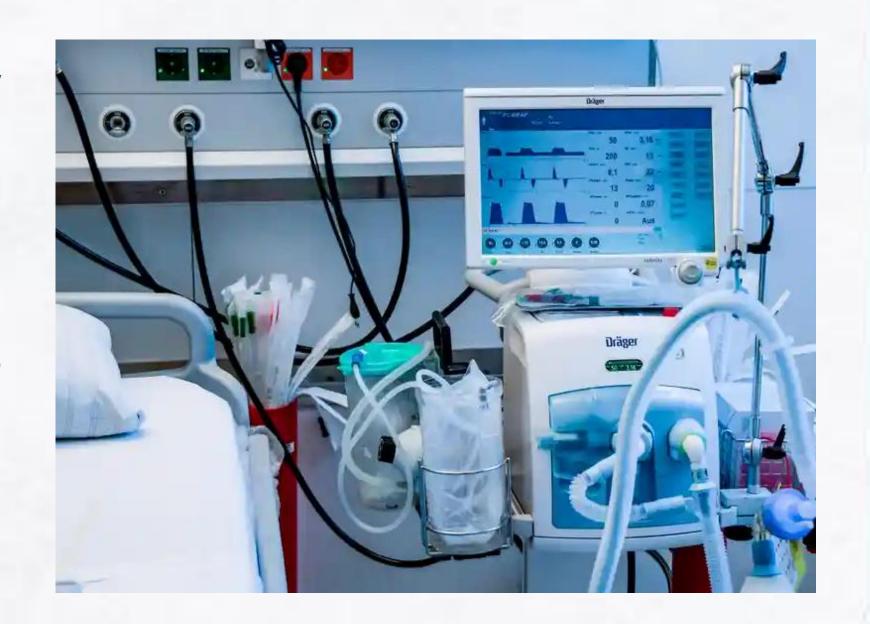
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**GROUP:** 

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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:**

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

# 1 5 2 6 4 8 7



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

