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• Equips hospitals around the world to deliver anaesthesia safely and economically.

• Our mission is to improve access to safe surgery and perioperative care by providing technology, service and training to strengthen anaesthesia capabilities.

• We value communication and strive to be available and provide a response to questions or service issues within 24 hours.
Universal Anaesthesia Machine

• Is a state-of-the-art inhalation anaesthesia workstation that:
  • Creates its own oxygen
  • Can operate with or without electricity
  • Transitions seamlessly to room air if no power or compressed oxygen is available.

• It was developed by an anaesthetist working in Malawi.

• The UAM is manufactured in the UK and has a CE mark.
The UAM is installed in 23 Countries in Africa, Asia, Europe and the Caribbean
How The UAM Works

Animation Video

http://www.gradianhealth.org/universal-anaesthesia-machine/
What does an anaesthesia machine do?

Has anyone ever had to go under anaesthesia?
  • How did you feel? Were you nervous?
What Makes the UAM Different

1. Multiple sources of oxygen

2. Seamless transition between continuous-flow and draw-over (hybrid)

3. Seamless transition between IPPV and spontaneous ventilation (no APL valve)
Four Main Advantages of the UAM

1. Doesn’t require oxygen
2. Doesn’t require electricity
3. Simple to use
4. Robust
How the Oxygen Concentrator works:

1. Air filters clean room air
2. Compressor pressurizes room air
3. Zeolite towers remove nitrogen from the air and produce up to 95% oxygen
4. Storage tank for oxygen to maintain up to 10 L/minute
UAM Provides 5 Sources of Oxygen

1. Oxygen Concentrator

2. Pipeline and cylinder
UAM Provides 5 Sources of Oxygen

3. Pin-index cylinder

4. Inlet for $O_2$ from external flow meter

5. Room air inlet = 21% oxygen
• Has a re-chargeable internal battery that lasts for 4-6 hours.
• The Monitor is securely attached to the UAM’s top shelf
  • Removing it for use without the UAM will void its warranty
• Consumables are not replaced by Gradian
• Monitor provided by, but not made by Gradian
UAM Ventilator (optional)

- Battery lasts for up to 6 hours
- Electrically driven bellows that don’t require compressed gas and consumes little power
- Real-time displays of pressure vs. time, flow vs. time

The Ventilator Components

- Electrically Driven Bellows
  Requires no compressed gas and consumes little power
- Battery Backup
  Operates on rechargeable batteries for up to 6 hours
- Measurements
  Real time measurement of Minuto Volume, Tidal Volume, Peak Pressure, Mean Pressure, and PEEP
- Settings
  Easy to change ventilation parameters
- Ventilation Modes
  Volume Controlled, Pressure Controlled and Spontaneous
- Waveforms
  Real-time displays of pressure vs. time, flow vs. time, and compliance loops in all ventilation modes
UAM Daily User Maintenance Video

http://www.gradianhealth.org/resources/
Tips to Preserve the Life of the UAM

• We highly recommend a **voltage stabilizer** between the UAM and the electrical outlet to guard against spikes and brownouts.
  - If you don’t use a voltage stabilizer the UAM will shut off to protect itself against power outage as well as fluctuation in the electricity.

• Leave the UAM on (green main isolator switch on the back) to trickle charge the patient monitor, oxygen monitor, and ventilator.

• Every 3 months perform full function tests and preventive maintenance procedures as described in the UAM maintenance manual on page 43.
All UAMs come with at least a 2-year warranty that includes:

- Every 6 months one of our technicians will conduct an in-depth preventative maintenance check.
- Provide any spare parts needed
  - Consumables not included

Gradian Service team is always available to assist you!
A full list of resources is available at: http://www.gradianhealth.org/resources/
Gradian Health Systems

For comments or questions about service or training please contact us at:

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Or

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