Glostavent®
Providing safe anaesthesia in low resource settings

Saving lives
Battery backup power, ensuring delivery of safe anaesthesia

Innovation and development
Precision engineered for low maintenance and easy servicing

An asset, not a cost
The Glostavent® produces its own oxygen from the surrounding atmosphere

Designed to thrive in challenging locations
### Saving lives
- The Glostavent® range delivers safe inhalational anaesthesia, with or without electricity or compressed gases
- Designed with integrated safety systems, the Glostavent® range has won numerous international technology awards
- Suitable for adults, paediatrics and neonates

### An asset, not a cost
- Save the expense of compressed oxygen and air – the Glostavent® range produces its own oxygen from the surrounding atmosphere
- Soda lime not needed
- Minimal maintenance needed by hospital’s own technical staff

### Innovation and development
- Since 1995 Diamedica engineers have worked in limited resource environments and understand the challenges very well
- The Glostavent® range is designed for simplicity of use
- Backup power is integral to the Glostavent® range
- Engineered and manufactured in the UK, it’s robust and built to last
- CE Certified by an internationally recognised notified body

### Training and support
- Full training available in use and maintenance
- Free technical support for the lifetime of the machine
- Each unit is supplied with a comprehensive user manual and training demonstration videos

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### Pressurised oxygen supplies

<table>
<thead>
<tr>
<th>Pressurised oxygen supplies</th>
<th>can be</th>
<th>scarce, expensive or non-existent</th>
</tr>
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<tbody>
<tr>
<td>Frequent power cuts</td>
<td>are</td>
<td>common in many countries</td>
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### Helix Ventilator
- Pneumatic ventilator for adult, paediatric and neonate patients.
- The Helix ventilator is integral to the Glostavent® Helix
- Suitable for longer term ventilation post-operatively
- Triggers breathing control for pressure support
- Pressure or volume controlled

### Emergency backup if power fails
- In the event of a power failure, both the UPS (uninterruptible power supply) and backup compressor provide emergency power for the Glostavent® range
- Full functionality with UPS for 30 mins including oxygen concentrator
- Compressor for ventilator backup, air only, more than 12 hours
- Battery backup for ventilator with external oxygen source, more than 300 hours

### Oxygen supply
- The integral oxygen concentrator makes a continuous, inexhaustible supply of up to 10 lpm each of 95% oxygen and medical air
- The Glostavent® range automatically uses the oxygen concentrator, but alternative connections for oxygen cylinder and wall pipeline are also included
- The Glostavent® Helix can also be run from Diamedica’s oxygen reservoir storage system

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### Patient circuit
- Each Glostavent® is supplied with a complete set of patient circuits for adult, paediatric and neonatal use, including all tubing and valves required for anaesthetic delivery
- Easy to clean and maintain. Many Glostavent® Helix components are autoclavable, while others are reusable after disinfection

### Scavenger
- Used for removing exhaled gases

### Manual ventilation
- Self-inflating adult and paediatric bags supplied as standard for manual ventilation

### Oxygen analyser
- Measures and displays % inspired oxygen concentration
- Internal battery backup

### Uninterruptible power supply (UPS)
- Provides backup power to the Glostavent® range for 30 minutes
- Provides a voltage stabiliser to provide a constant, safe power supply, protecting against power surges that can damage equipment

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### Vapourisers
- Supplied with two vapourisers
- The unique 'vapouriser select technology' permits the safe delivery of a gaseous induction using Sevoflurane before switching to Isoflurane to maintain the anaesthetised state
- Safe and precise changeover between vapourisers, with no possibility of both units in use simultaneously
- Low resistance vapourisers enable seamless transition from continuous flow to draw over
- Thermally stable and functions accurately even in hot or humid theatre conditions
- Calibrated for Halothane and Isoflurane and Sevoflurane (select 2)
- Minimal maintenance-free and easy to clean

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### Training and support
- Full training available in use and maintenance
- Free technical support for the lifetime of the machine
- Each unit is supplied with a comprehensive user manual and training demonstration videos

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### Glostavent® Helix Duo

#### Features
- Supplied with two vapourisers
- The unique ‘vapouriser select technology’ permits the safe delivery of a gaseous induction using Sevoflurane before switching to Isoflurane to maintain the anaesthetised state
- Safe and precise changeover between vapourisers, with no possibility of both units in use simultaneously
- Low resistance vapourisers enable seamless transition from continuous flow to draw over
- Thermally stable and functions accurately even in hot or humid theatre conditions
- Calibrated for Halothane and Isoflurane and Sevoflurane (select 2)
- Minimal maintenance-free and easy to clean

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### Pressurised oxygen supplies

- 5 billion people have no access to safe, affordable surgical and timely anaesthesia care…

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### Diamedica
- A low-cost inhalational anaesthesia system with manual ventilator using high-quality Glostavent® components
- For use where the patient is breathing spontaneously or only requires manually assisted ventilation

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### See over for technical information
### Specifications

**Glostavent® Helix Duo**

- Vaporiser: Yes
- Suitable for drawover and continuous flow
- Anaesthetic agent: Isoflurane or Halothane or Sevoflurane (select 2)
- Capacity: 150ml
- Agent percentage: 0 - 5% (0-8% for Sevoflurane)
- Ventilator function: Time cycled, volume limited, pressure generator
- Drive gas: Oxygen from the concentrator with cylinder back-up
- Tidal volume: 50 - 1200ml
- Inspiratory/expiratory ratio: 1 : 2
- Mode of operation: High and low with LED indicators
- Operating temperature range: 0 - 40°C
- Battery backup life: Approx 300 hours
- Respiratory rate: 4 to 40 breaths/min
- Battery recharge: 90% within 3 hours
- Alarms: High and low with LED indicators
- Battery backup for ventilator: Yes
- Drive pressure/volume: 5-50cm water
- Weaning/Pressure support: Triggered 1-5cm H₂O
- Drive pressure/volume: >20psi: 1/6 minute volume

**Glostavent® Helix**

- Vaporiser: Yes
- Suitable for drawover and continuous flow
- Anaesthetic agent: Isoflurane or Halothane (dual agent) or Sevoflurane (select 1)
- Capacity: 150ml
- Agent percentage: 0 - 5% (0-8% for Sevoflurane)
- Ventilator function: Time cycled, volume limited, pressure generator
- Drive gas: Oxygen from the concentrator with cylinder back-up
- Tidal volume: 50 - 1200ml
- Inspiratory/expiratory ratio: 1 : 2
- Mode of operation: High and low with LED indicators
- Operating temperature range: 0 - 40°C
- Battery backup life: Approx 300 hours
- Respiratory rate: 4 to 40 breaths/min
- Battery recharge: 90% within 3 hours
- Alarms: High and low with LED indicators
- Battery backup for ventilator: Yes
- Drive pressure/volume: 5-50cm water
- Weaning/Pressure support: Triggered 1-5cm H₂O
- Drive pressure/volume: >20psi: 1/6 minute volume

**Glostavent® ECO2**

- Vaporiser: Yes
- Suitable for drawover and continuous flow
- Anaesthetic agent: Isoflurane or Halothane (dual agent) or Sevoflurane (select 1)
- Capacity: 150ml
- Agent percentage: 0 - 5% (0-8% for Sevoflurane)
- Ventilator function: Time cycled, volume limited, pressure generator
- Drive gas: Oxygen from the concentrator with cylinder back-up
- Tidal volume: 50 - 1200ml
- Inspiratory/expiratory ratio: 1 : 2
- Mode of operation: High and low with LED indicators
- Operating temperature range: 0 - 40°C
- Battery backup life: Approx 300 hours
- Respiratory rate: 4 to 40 breaths/min
- Battery recharge: 90% within 3 hours
- Alarms: High and low with LED indicators
- Battery backup for ventilator: Yes
- Drive pressure/volume: 5-50cm water
- Weaning/Pressure support: Triggered 1-5cm H₂O
- Drive pressure/volume: >20psi: 1/6 minute volume

**Manual Ventilation**

- Ventilator type: Pneumatic
- Drive gas: Driven by oxygen from the concentrator with cylinder back-up
- Tidal volume: 50 - 1200ml
- Inspiratory/expiratory ratio: 1 : 2
- Ventilator function: Time cycled, volume limited, pressure generator
- Drive gas: Driven by oxygen from the concentrator with cylinder back-up
- Tidal volume: 50 - 1200ml
- Inspiratory/expiratory ratio: 1 : 2
- Ventilator type: Pneumatic
- Drive gas: Driven by oxygen from the concentrator with cylinder back-up
- Tidal volume: 50 - 1200ml
- Inspiratory/expiratory ratio: 1 : 2
- Drive gas: Driven by oxygen from the concentrator with cylinder back-up
- Tidal volume: 50 - 1200ml
- Inspiratory/expiratory ratio: 1 : 2

**Integral Oxygen Concentrator**

- Maximum litres of oxygen per minute: 0 - 10 l/pm at 95%
- Maximum litres of air: Audible failure alarm, low oxygen light
- Notification/warning system: Yes
- Hours meter: 590W

**Alternative oxygen supply option**

- Regulator with connection for oxygen cylinder: Yes - 4 Bar
- Whip hose for pipeline oxygen: Yes - 3 Bar

**Emergency backup if power fails**

- Full functional UPS: Yes
- Compressor for ventilator backup: Yes - 4 Bar
- Battery backup for ventilator: Yes - 3 Bar

**UPS**

- Type: 2 KVA double on-line
- Circuit breaker: Yes
- Operating input range: 160-300 volts 50Hz +/- 4%
- Power backup (mins): 30

**Oxygen Flush**

- Yes

**Scavenger for exhaled gas**

- Yes

**Additional standard items**

- Adult, paediatric and neonatal circuits: Yes, autoclavable
- Autoclavable drugs tray: Anodised aluminium with 4 antistatic castors and brakes
- Workstation: Yes, autoclavable

**PEEP**

- 0-20 cm H₂O

**Patient Monitoring**

- Optional

**Power supply**

- 160-300 Volts

**Machine dimensions and weight**

- 54 x 66 x 145cm
- 120kg

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**Glostavent Anaesthesia Systems**

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