Product Catalogue

Airway Management
**VBM Difficult Airway Algorithm**

### Plan A
**Initial endotracheal intubation plan**

- **Induction**
  - Direct Laryngoscopy
  - Tracheal Intubation
  - BMV
    - Face Masks
    - Resuscitation Bags
  - Optimising Direct Laryngoscopy
  - Succeed
  - Tracheal Intubation
    - Laryngobloc
    - Cuff Pressure Gauges
  - Intubation Stylet
    - Stylets
    - Laryngobloc

### Plan B
**Secondary endotracheal intubation plan**

- **Induction**
  - Direct Laryngoscopy
  - Tracheal Intubation
  - BMV
    - Face Masks
    - Resuscitation Bags
  - Optimising Direct Laryngoscopy
  - Succeed
  - Tracheal Intubation
    - Laryngobloc
    - Cuff Pressure Gauges
  - Intubation Stylet
    - Stylets
    - Laryngobloc

### Plan C
**Maintenance of oxygenation, ventilation, awakening, awake intubation technique, postponement of surgery**

- **Induction**
  - Direct Laryngoscopy
  - Tracheal Intubation
  - BMV
    - Face Masks
    - Resuscitation Bags
  - Optimising Direct Laryngoscopy
  - Succeed
  - Tracheal Intubation
    - Laryngobloc
    - Cuff Pressure Gauges
  - Intubation Stylet
    - Stylets
    - Laryngobloc

### Plan D
**Rescue techniques for “cannot intubate – cannot ventilate” situation**

- **Induction**
  - Direct Laryngoscopy
  - Tracheal Intubation
  - BMV
    - Face Masks
    - Resuscitation Bags
  - Optimising Direct Laryngoscopy
  - Succeed
  - Tracheal Intubation
    - Laryngobloc
    - Cuff Pressure Gauges
  - Intubation Stylet
    - Stylets
    - Laryngobloc

- **Plan D**
  - **Cannula Cricothyrotomy**
    - Narrow bore
      - Manujet III & Jet-Ventilation Catheter
    - Wide bore
      - Quicktrach I & II
  - Surgical Cricothyrotomy
    - Surgicric I & II
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- ![Reusable](icon.png)
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- ![Latex free](icon.png)
Laryngeal Tube

Laryngeal Tube LTS-D –
The 2nd generation supraglottic airway device

The LTS-D complies with international guidelines and recognised industry algorithms. The NAP4, one of the most important international anesthesia reports, recommends using 2nd generation supraglottic airway devices that prevent the risk of aspiration by incorporating a built-in drain tube. All LTS-D’s come with this feature as standard.

The new Laryngeal Tube also stands out for its unique high volume, low pressure cuffs. The extremely thin wall is atraumatic to the pharyngeal mucosa, and seals the hypopharynx reliably at low cuff pressures. Soft material and rounded edges additionally enhance patient comfort and safety.

The LTS-D is designed to be easy to use with minimal training. The colour coded system has proven invaluable in emergencies as the syringe indicates the recommended maximum inflation volume. The Laryngeal Tube allows correct ventilation - even in situations with limited space.

References


Drain Tube

The LTS-D offers the largest suction possibility with easy access – up to 18 Fr.

The NAP4 report recommends “that all hospitals have 2nd generation supraglottic airway devices available for both routine use and rescue airway management.”

Also recommended by the European Resuscitation Council (ERC).

Effective Ventilation

The redesign of the ventilation section offers more space in the hypopharynx. Multiple ventilation outlets between both cuffs lie in front of the larynx, allowing an appropriate tidal volume.

Order information

Laryngeal Tube LTS-D
for single use, sterile

<table>
<thead>
<tr>
<th>Size</th>
<th>Patient</th>
<th>Weight / Height</th>
<th>Colour</th>
<th>Single Set with colour coded syringe</th>
<th>Set of 10</th>
<th>Emergency Set with colour coded syringe</th>
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</table>

Patient Safety

Thin walled cuffs guarantee a maximum airway leak pressure at low cuff pressure (< 60 cmH₂O) making the LTS-D atraumatic to the mucosa.
Laryngeal Tube
intubating Laryngeal Tube iLTS-D –
VBM’s 3rd generation supraglottic airway device

Up to 20% of all emergency intubations are estimated to be difficult to manage. Having the right system available is the cornerstone of effective airway management in an emergency. Airway algorithms recommend the usage of supraglottic airway devices (SAD) as options to overcome difficult scenario.

In order to prevent aspiration, the NAP4 report prescribes the use of devices with gastric access. SAD with intubating capability provide a way to reach a definitive airway (ET Tube placement).

As VBM’s 3rd generation SAD the iLTS-D compiles all essential features required to achieve and protect an airway:

- **Ventilation** – wide airway section to optimise gas flow and low pressure cuffs to maximise sealing performance
- **Drain Tube** – gastric access to permit the passage of a large gastric tube
- **Intubation** – special design of ventilation lumen to enable fiberoptic insertion of an ET Tube

**Features**

**Efficient sizing**
The iLTS-D is the ideal solution to save space in emergency bags and crash carts.
Only two sizes match all patients ≥ 125 cm.

- Size 2.5/3: 125-155 cm
- Size 4/5: ≥ 155 cm
Ventilation
The design of the ventilation section optimises gas flow and prevents airway obstruction from a downfolded epiglottis. Thin walled cuffs guarantee a maximum airway leak pressure at low cuff pressure (< 60 cmH₂O).

Drain Tube
The drain tube can accommodate a large gastric tube:
Size 2.5/3: max. 16 Fr
Size 4/5: max. 18 Fr

Intubation
The iLTS-D secures the airway in emergency and enables fiberoptic placement of an ET Tube without compromising patency of supraglottic ventilation.
Size 2.5/3: ET Tube max. I.D. 6.5 mm
Size 4/5: ET Tube max. I.D. 8.0 mm

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Order information

**intubating Laryngeal Tube iLTS-D**
for single use, sterile

<table>
<thead>
<tr>
<th>Size</th>
<th>Patient</th>
<th>Single Set</th>
<th>Set of 10</th>
<th>Intubation Set</th>
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<td></td>
<td></td>
<td>1x iLTS-D</td>
<td>10x iLTS-D</td>
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<td></td>
<td></td>
<td>1x Syringe</td>
<td></td>
<td>1x ET Tube</td>
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<tr>
<td></td>
<td></td>
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<td></td>
<td>1x Stabilizer</td>
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<td></td>
<td></td>
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<td>1x Syringe</td>
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<td>REF 32-08-209-1</td>
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**ET Tube with Stabilizer**
for single use, sterile

<table>
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<th>for iLTS-D Size</th>
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<tr>
<td>I.D. 7.5 mm</td>
<td>4/5</td>
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Cuff Pressure Gauges
General Information

Cuff pressure gauges have been established as a standard device in many clinical institutions. More and more societies of anaesthesiology and intensive care throughout the world are endorsing the systematic control of cuff pressure in the recommendation of their guidelines. Ventilator-associated pneumonia (VAP) is the leading nosocomial cause of mortality in the Intensive Care Unit and has significant impact on hospital costs and length of stay. A leading cause of VAP is micro-aspiration of potentially infectious secretions through microchannels formed from infolding of redundant cuff material after inflation. Cuff pressure management can contribute to reduce tracheal ischemia and subsequent complications. Availability of the device and precision of the measurement are fundamental to the success of treatments.

As the inventor of the cuff manometer, VBM is committed to drive the development of cuff pressure measuring in hospitals. In developing new cuff pressure gauges VBM follows three main principles: Reliability, accuracy and ease of use.

VBM offers the largest choice of systems, covering analog, digital and automatic devices, pediatric and adult for OR, pre-hospital and ICU environment.
Cuff Pressure Gauges

**Cuff Controller** – Automatic Cuff Pressure Gauge

Clinical studies have proven the positive effects of a continuous control of cuff pressure in order to prevent ventilator-associated pneumonia (VAP).

VBM Cuff Controller is an electronic device that has been developed for the continuous control and monitoring of cuff pressure. It has proven showing effectiveness in maintaining cuff pressure in recommended range in ICU patients.

### Features

**Front Side**
- Large LCD display
- Intuitive cuff pressure adjustment
- Adjustable range: 0-60 cmH₂O
- Integrated alarms for over pressure or leakage

**Back Side**
Universal clamp for fixation to standard rail

### Order information

**Cuff Controller**
pre-adjusted to 25 cmH₂O,
with battery, universal clamp and connecting tube (200 cm)

REF 55-13-500
AG Cuffill is the only device capable of simultaneous control of volume and pressure. It is very light and easy to use whilst providing high accuracy of cuff pressure measurement. The compact size makes it very convenient for pre-hospital environment. It allows control and adjustment of pressure for all cuffed airway devices. It is especially beneficial for low volume cuffs such as pediatric tracheal tubes.
**Features**

**Digital display**
For ease of use and to enhance accuracy of measurement.

**Measuring Cuff Pressure**
When the plunger is in closed position the specific sensor technology allows cuff pressure measurement with no dead space. Indication of pressure will change during breathing cycle.

**Adjusting Cuff Pressure**
Immediate cuff pressure measurement and requested adjustment are made with one single hand as soon as the plunger is in motion.

**Minimal Storage Space**
With the small dimensions (13 x 3 x 2 cm) the AG Cuffill requires very little storage space. Therefore it is ideal for emergency bags and vehicles, helicopters, doctors’ coats and emergency cabinets.

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**Order information**

**AG Cuffill**
Electronics is limited to 100 measurements, with automatic countdown function

**REF 59-10-100** | Box 10
Cuff Pressure Gauges

Cuff Manometer – Analog Cuff Pressure Gauge

The use of VBM Cuff Pressure Gauges in combination with High Volume Low Pressure Cuffs can reduce micro-aspiration and prevent VAP from occurring in the first place.

The devices reduce the risk of pressure necrosis and mucosal ischemia. They help preventing the risk of aspiration which can lead to the possibility of pneumonia.

The analog system with no dependence on any energy source makes the VBM cuff pressure gauges highly reliable under any circumstances (outdoor, transport, OR). The accuracy of the display as well as the pre-defined pressure ranges help users to maintain the correct pressure with any kind of airway devices.

Features

Green Range
The green ranges on the scale mark the ideal ranges for either tracheal tubes or laryngeal tubes.

Release Valve & Hook
- Pressure increase due to the diffusion of anesthetic gases can be adjusted with the red release valve
- Hook fits into standard rail
Luer Connection
For connection to the tracheal tube allowing pressure measuring and regulation.

Vacuum Valve
For connection to the tracheal tube allowing a complete deflation of the cuff by squeezing the inflation bulb.

Order information

Analog Cuff Pressure Gauge, complete with connecting tube (100 cm)

**Universal**
Ø 68 mm scale
Scala with two green ranges
- for tracheal tubes (22-32 cmH₂O)
- for Laryngeal Tubes and Laryngeal Masks (32-60 cmH₂O)

**Pocket**
Ø 50 mm scale

**Sensitive**
Ø 50 mm scale
with hook

**Pediatric**
Ø 50 mm scale
Pressure range: 0-60 cmH₂O

**Monitor**
Ø 68 mm scale
Up to 3% of surgical patients have a so-called difficult airway, making laryngoscopic intubation problematic and sometimes impossible. Given that direct laryngoscopic visualization of the glottis may not be possible, especially in a timely manner during emergency situations, intubating guides, stylets and introducers have been developed and have proved to be effective, safe and simple approaches. VBM offers a wide range of devices covering all techniques relying on the use of an intubating guide.

S-Guide – Malleable intubating guide for Difficult Airway Management

In cooperation with PD Dr. Patrick Schoettker from the University Hospital of Lausanne / Switzerland VBM has developed a new malleable intubating guide – the S-Guide.

Very versatile in its indications, the S-Guide can be used during conventional as well as video laryngoscopy. It works especially well with the non-channelled video laryngoscope blades.

The design of the S-Guide unifies all the essential specifications that are usually split between introducers and stylets. This makes it the ideal tool to overcome a difficult airway scenario.
3 benefits in 1 design

Oxygenation
The apnea can be prolonged through oxygen flow via the O₂ Connector. The 23 cm of flexible segment eases connection to the oxygen source without impacting placement of the S-Guide.

Directional
The malleable segment allows the S-Guide to be adjusted to any required geometry starting after the orange tip and up to 42 cm. The hockey stick shape at the distal end and the right angle at the level of the ET Tube connector can be easily achieved without compromising oxygenation.

Multifunctional tip
Preformed, soft and coloured distal tip enhances patient safety. 3 outlets for O₂ administration provide oxygen flow to prevent hypoxia.

Order information

S-Guide
acc. to Schoettker with O₂ Connector for single use, sterile

REF 33-90-650-1  Box 5

Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
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<td>Size</td>
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</tr>
<tr>
<td>Length</td>
<td>65 cm</td>
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<tr>
<td>Diameter</td>
<td>≥ 1.0. 6.0 mm</td>
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</table>

Stylets, Introducers and Tube Exchangers

**METTS** (Muallem ET Tube Stylet)
for difficult intubation

- core made of metal, malleable (maintains curvature)
- flexible preformed tip
- graduation marks
- for single use, sterile

<table>
<thead>
<tr>
<th>Size</th>
<th>Length</th>
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<tr>
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**Stylet**
malleable intubation stylet

- soft, atraumatic tip
- with and without moveable silicone connector
- reusable

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<td>7.0 - 11.0 mm</td>
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**Pocket Introducer**
for difficult intubation

- folded to 20 cm, unfolds to 65 cm
- ready for use within seconds
- preformed tip
- graduation marks
- for single use, sterile

<table>
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in robust plastic cartridge

<table>
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**Introducer**
for difficult intubation

- lumen-design, O₂ Connector included
- rigid preformed tip
- graduation marks
- for single use, sterile

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<th>Size</th>
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</table>
**METTI** (Muallem ET Tube Introducer)

for difficult intubation and tube exchange

- core made of plastic, semi-rigid (flexible)
- flexible, preformed tip
- graduation marks
- for single use, sterile

<table>
<thead>
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<th>Size</th>
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**Tube Exchanger**

for extubation and exchange of ET Tubes

- lumen-design, O₂ Connector included
- graduation marks
- for single use, sterile

<table>
<thead>
<tr>
<th>Size</th>
<th>Length</th>
<th>for ET Tube</th>
<th>REF</th>
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<tbody>
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<tr>
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**Intubation Catheter**

for fiberoptically assisted intubation (≤ 4.0 mm)

- lumen-design, O₂ Connector included
- graduation marks
- for single use, sterile

<table>
<thead>
<tr>
<th>Size</th>
<th>Length</th>
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<th>for Fiberoptic</th>
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<th>Box</th>
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<td>≤ 4.0 mm</td>
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**References**


Laryngoscopes

Laryngobloc® Oxford, Miller, Macintosh

Laryngoscope handles are a potential vector for infection transmission and require adequate decontamination. An official report from healthcare agency has reported patient death caused by a failure to decontaminate a laryngoscope handle appropriately.1)

Totally disposable laryngoscope is an alternative to reduce transmission of prions. It also contributes to reduce hospital costs due to absence of cleaning, decontamination and sterilisation.

The design of Laryngobloc® is based on a single use system for handle and blade. The separate Light Block with powerful LED is connected on demand and isolated from the contaminated part. A wide range of blades is available to suit all laryngoscopy techniques.

Features

Modular System

The reusable Light Block is inserted into the single use handle at the time of laryngoscopy. It is then removed after laryngoscopy and the single use Laryngobloc® is discarded.

**LED light source**
- Extreme bright light
- Constant light quality
- Energy saving
- Long life time

**Stability**
- Torsion and flexion proof due to one piece design
- Resistance is comparable to metal blade

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**Order information**

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**Laryngobloc®**
for single use, Material: Polypropylene

<table>
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<tr>
<th>Size</th>
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<td>36-25-004</td>
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</table>

**Light Block**
with LED light source
(Battery-Type: LR6-1.5V-AA), reusable

- standard (with 2 batteries)
  REF 36-10-000
- short (with 1 battery)
  REF 36-15-000

**Laryngobloc® Standard Set**
consisting of Laryngobloc® with standard handle
- 1 x Macintosh # 2, 3, 4
- 1 x Miller # 1
- 1 x Light Block, standard

REF 36-90-200

**Laryngobloc® Emergency Set**
consisting of Laryngobloc® with short handle
- 1 x Macintosh # 4
- 1 x Oxford # 0
- 1 x Light Block, short

REF 36-90-100
Cricothyrotomy Devices
General Information

Surgical airway is the ultima ratio for the unsuccessful arm of the emergency pathway. Identification of the cannot intubate — cannot ventilate scenario should result in immediate consideration of surgical airway access. Delays in achieving airway control and oxygenation will lead to hypoxic brain injury.

The incidence level of cricothyrotomy is estimated at approximately 1% of all emergency airway cases. In order to master a cricothyrotomy in an emergency successfully, training on simulators (see page 33) seems to be indispensable.

VBM provides specific devices for every scenario of the surgical airway, like:

- Surgical airway with Surgicric I and II
- Narrow bore cannula with Jet-Ventilation Catheters and Manujet III
- Wide bore cannula with Quicktrach I, II and Surgicric III

Surgicric I, II, III

The Surgicric is a cricothyrotomy set to maintain ventilation in case of obstruction of the upper airway.

With the Surgicric I VBM offers a cricothyrotomy set to perform the Rapid Four-Step Technique, Surgicric II is applied to the classical surgical technique and Surgicric III allows a cricothyrotomy according to the Seldinger technique.

The unique instrument packing system provides the following advantages to the user:

- Clear overview of all components
- Sterile application in any environment
- Small pack size, making it ideal for emergency bags

The main feature of Surgicric is the special combination of tube and dilator. The locking mechanism and the soft tip maximise patient safety and reduce the risk of injury.

Pack size: 24 cm (L) x 13 cm (W) x 4 cm (H)
Unfolded size / sterile area: 56 cm (L) x 39 cm (W)
Patient Safety
The thin-walled, low pressure cuff guarantees a perfect seal, allows efficient ventilation and protects against aspiration.

Locking mechanism
The unique locking mechanism prevents accidental dislocation of the dilator from the tracheal tube during insertion.

Individually adjustable
The specially designed tracheal tube is longer than a standard tracheostomy tube and with the adjustable flange allows individual adaptation to the anatomical conditions of the patient.
Cricothyrotomy Devices

**Surgicric I, II, III**

### Surgicric I – Rapid Four-Step Technique
1. Scalpel # 20
2. Syringe 10 ml
3. 6.0 mm cuffed tracheal tube with dilator
4. Extension tubing
5. Tracheal hook
6. Necktape

**Surgicric I**
for single use, sterile

REF 30-08-007-1 [Box 1]

### Surgicric II – Classic surgical technique
1. Scalpel # 11
2. Syringe 10 ml
3. 6.0 mm cuffed tracheal tube with dilator
4. Necktape
5. Extension tubing
6. Tracheal hook
7. Blunt scissors
8. Speculum

**Surgicric II**
for single use, sterile

REF 30-08-117-1 [Box 1]

### Surgicric III – Seldinger technique
1. Scalpel # 11
2. Syringe 10 ml
3. 6.0 mm cuffed tracheal tube with dilator
4. Necktape for tracheal tube
5. Extension tubing
6. Necktape for introducer needle
7. Introducer needle
8. Guidewire

**Surgicric III**
for single use, sterile

REF 30-08-227-1 [Box 1]
Cricothyrotomy Devices

**Manujet III / Jet-Ventilation Catheters**

The Manujet III with Jet-Ventilation Catheters is recommended for emergency rooms, crash carts, ambulances and operating rooms as it guarantees a quick and efficient oxygenation of a patient.

**Emergency use**

As a life saving manoeuvre in the “cannot intubate – cannot ventilate” situation for oxygenation to avoid a severe desaturation of the patient.

For **pre-hospital use** if there is an obstruction of the upper airway. Trans Tracheal Jet-Ventilation (TTJV) is faster and simpler than surgical cricothyrotomy in emergencies with fewer complications.

** Elective use**

- Microlaryngoscopy
- Rigid bronchoscopy
- To assist a difficult fiberoptic intubation
- Predicted difficult extubation

**Order information**

**Manujet III**

with 4 m pressure hose, Jet-Ventilation Catheters acc. to Ravussin (13 G, 14 G, 16 G) and 100 cm connecting tube

REF 30-01-003

**Jet-Ventilation Catheters acc. to Ravussin**

for single use, sterile

<table>
<thead>
<tr>
<th>Size</th>
<th>Emergency Set with syringe</th>
<th>Box</th>
<th>Anesthesia Set without syringe</th>
<th>Box</th>
</tr>
</thead>
<tbody>
<tr>
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<td>REF 30-02-918-1</td>
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</table>

**References**

NAP4 (4th National Audit Project of the Royal College of Anesthetists and the Difficult Airway Society)

Major Complications of Airway Management in the United Kingdom, March 2011, Chapter 13, page 106.
Cricothyrotomy Devices
Quicktrach I

Stopper
prevents the needle from being inserted too deep and therefore reduces the risk of posterior tracheal wall perforation

Metal needle
specially grinded needle tip only cuts 2 mm and dilates to 4 mm (Adult Size)

Necktape
- for safe fixation
- from soft foam material

Order information

<table>
<thead>
<tr>
<th>Quicktrach I in blister packaging for single use, sterile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>Infant</td>
</tr>
<tr>
<td>Child</td>
</tr>
<tr>
<td>Adult</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quicktrach I in plastic tube for single use, sterile ideal for emergency bags (compact and robust)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>Child</td>
</tr>
<tr>
<td>Adult</td>
</tr>
</tbody>
</table>
Cricothyrotomy Devices
Quicktrach II with Cuff

Safety Clip
The plastic cannula is pushed forward until the safety clip clicks into position. The safety clip is firmly fixed at the connector and therefore avoids that the metal needle is pushed out of the cannula again by mistake.

Cuff
- cuff is made of ultra-thin material and is very robust
- allows sufficient ventilation with aspiration protection

Stopper
prevents the needle from being inserted too deep and therefore reduces the risk of posterior tracheal wall perforation

Metal needle
specially grinded needle tip only cuts 2 mm and dilates to 4 mm (Adult Size)

Order information

Quicktrach II in blister packaging
for single use, sterile

<table>
<thead>
<tr>
<th>Patient</th>
<th>I.D.</th>
<th>Quicktrach II with Cuff</th>
<th>Box</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

Quicktrach II in plastic tube
for single use, sterile
ideal for emergency bags (compact and robust)

<table>
<thead>
<tr>
<th>Patient</th>
<th>I.D.</th>
<th>Quicktrach II with Cuff</th>
<th>Box</th>
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</thead>
<tbody>
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<td>REF 30-10-904-1</td>
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</tbody>
</table>
Airway Devices for Endoscopy
Endoscopy Mask, Bronchoscope Airway

The Endoscopy Mask allows a safe combination of FOB intubation and ventilation. The design is made to prevent airway leak at any step of the procedure, providing excellent seals on patient’s face and during insertion of tracheal tube via bronchoscope. It is especially beneficiary to patient comfort and working quality of the anesthesiologist during awake procedure.

Application
- Fiberoptic Intubation
- Bronchoscopy
- Gastroenterology
- Transesophageal Echocardiography

Order information

<table>
<thead>
<tr>
<th>Size</th>
<th>Patient</th>
<th>Membrane</th>
<th>REF</th>
<th>Box</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Newborn</td>
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<td>30-40-000</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>Infant</td>
<td>2.0 mm</td>
<td>30-40-111</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>Child</td>
<td>3.0 mm</td>
<td>30-40-333</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>Child</td>
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<td>30-40-335</td>
<td>6</td>
</tr>
<tr>
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<td>30-40-555</td>
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</tr>
<tr>
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<td>Adult</td>
<td>10.0 mm</td>
<td>30-40-777</td>
<td>6</td>
</tr>
</tbody>
</table>

References


Bronchoscope Airway
for single use, sterile, Material: EVA

The lumen is large enough to guide the bronchoscope and ET Tube. The length is designed to form a path leading to the glottis. The device has a breakaway quality for easy removal after intubation. The external biteblock protects the bronchoscope.

<table>
<thead>
<tr>
<th>Size</th>
<th>Length</th>
<th>REF</th>
<th>Box</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
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<td>65 mm</td>
<td>30-40-420-1</td>
<td>10</td>
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<tr>
<td>4</td>
<td>85 mm</td>
<td>30-40-440-1</td>
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</table>
Airway Devices for Endoscopy

**Gastro-Laryngeal Tube G-LT**

The Gastro-Laryngeal Tube G-LT is designed for obtaining and maintaining control of airway patency during medium to long-term complex gastrointestinal endoscopic procedures performed on adults under deep sedation or general anesthesia while maintaining spontaneous or assisted ventilation.

**Application**

- Diagnostic and therapeutic ERCP (Endoscopic Retrograde Cholangiopancreatography)
- Enteroscopy
- Percutaneous Endoscopic Gastrostomy (PEG), particularly in neurologic patients

**Advantages**

- Prevention and control of hypoventilation and desaturation
- Faster endoscopic procedures
- Ease insertion of duodenoscopes
- No direct laryngoscopy or muscle relaxation required
- Enables capnometry and capnography
- Less use of anesthetic drugs
- Protects the airways from gastro-oesophageal reflux and inhalation of gastric content

**Order Information**

**Gastro-Laryngeal Tube G-LT**

*Reusable, Material: Silicone*

<table>
<thead>
<tr>
<th>Patient</th>
<th>Size</th>
<th>REF</th>
<th>Box</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult</td>
<td>&gt; 155 cm</td>
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</tr>
</tbody>
</table>

**References**

VBM proposes a very large range of face masks with several types of materials and shapes. It covers all patient’s size from newborn to adult. There are two main product groups with reusable and single use masks.

Amongst others VBM offers masks with inflatable cushion and silicon lip.

## Silicone Face Masks

### reusable

#### Bi-Mask with silicone lip

Silicone mask with internal plastic shell (PSU)

<table>
<thead>
<tr>
<th>Size</th>
<th>Patient</th>
<th>Connection</th>
<th>Colour code</th>
<th>REF</th>
<th>Box</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Child</td>
<td>I.D. 22 mm</td>
<td>green</td>
<td>35-65-222</td>
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<tr>
<td>3</td>
<td>Adult, small</td>
<td>I.D. 22 mm</td>
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<tr>
<td>4</td>
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<tr>
<td>6</td>
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<td>I.D. 22 mm</td>
<td>blue</td>
<td>35-65-226</td>
<td>1</td>
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</table>

#### Bi-Mask with inflatable cushion

Silicone mask with internal plastic shell (PSU)

<table>
<thead>
<tr>
<th>Size</th>
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<th>Connection</th>
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<th>REF</th>
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<tbody>
<tr>
<td>3</td>
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</tr>
<tr>
<td>5/6</td>
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<td>I.D. 22 mm</td>
<td>purple</td>
<td>35-75-225</td>
<td>1</td>
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</table>
Mask with plastic dome and inflatable cushion

<table>
<thead>
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<th>Connection</th>
<th>Colour code</th>
<th>REF</th>
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<tbody>
<tr>
<td>2</td>
<td>Child</td>
<td>I.D. 22 mm</td>
<td>green</td>
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</tr>
<tr>
<td>3</td>
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<tr>
<td>4</td>
<td>Adult, medium</td>
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<td>35-70-224</td>
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<tr>
<td>5</td>
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<td>I.D. 22 mm</td>
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<td>35-70-225</td>
<td>1</td>
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<tr>
<td>6</td>
<td>Adult, extra large</td>
<td>I.D. 22 mm</td>
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Rendell Baker Mask

<table>
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Pediatric Mask, round

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PVC Face Masks

for single use

Mask with inflatable cushion

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<th>Colour code</th>
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<td>blue</td>
<td>REF 35-40-206</td>
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</table>
Masks and Resuscitation Bags

Resuscitation Bags

Manual resuscitation bags are used primarily for resuscitation and manual ventilation. The VBM devices are equipped with an intake valve that has a built-in reservoir valve. They are available in single use and reusable version.

Silicone Resuscitation Bags

reusable, with barcode and serial number

Order information

Silicone Resuscitation Bags

<table>
<thead>
<tr>
<th>Resuscitation Bag</th>
<th>Infant 250 ml</th>
<th>Child 500 ml</th>
<th>Adult 2000 ml</th>
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<tbody>
<tr>
<td>40 cmH₂O pressure relief</td>
<td>REF 80-10-300</td>
<td>REF 80-10-200</td>
<td>REF 82-10-100</td>
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<tr>
<td>20 cmH₂O pressure relief</td>
<td>REF 80-10-306</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>without pressure relief</td>
<td>REF 80-10-301</td>
<td>REF 80-10-201</td>
<td>REF 82-10-101</td>
</tr>
</tbody>
</table>
PVC Resuscitation Bags
for single use

Dispo-Resuscitator-Kit consisting of:
- PVC-Resuscitation Bag (40 cmH₂O pressure relief)
- Face Mask
- Reservoir Bag
- O₂-Tubing 200 cm
- PEEP-Adapter

Order information

Dispo-Resuscitator-Kit

Infant consisting of Resuscitation Bag 280 ml and face mask # 1
REF 84-10-395 Box = 6 kits

Child consisting of Resuscitation Bag 550 ml and face mask # 3
REF 84-10-295 Box = 6 kits

Adult consisting of Resuscitation Bag 1500 ml and face mask # 5
REF 84-10-195 Box = 6 kits
Airway Management Simulators

By nature airway management includes uncertainty, complexity and time pressure. Simulation is the ideal method for replicating clinical situation and contributes to improve patient care by enhancing proficiency of practitioners.

VBM has developed a wide range of skill-trainers and mannequins with the highest possible fidelity to train all airway procedures. The devices cover clinical situation such as direct laryngoscopy, video laryngoscopy, fiberoptic bronchoscopy, supraglottic airway devices insertion, bag-mask ventilation, and cricothyrotomy.

Especially cricothyrotomy is a rarely performed procedure the technical proficiency can realistically only be obtained through simulated learning. VBM offers the widest range of cricothyrotomy skill-trainers for simulation.

**BILL**
- ET Intubation
- Supraglottic airway insertion
- Mask ventilation
- Fiberoptic bronchoscopy (if bronchial tree is connected)
- Fiberoptic intubation
- Video laryngoscopy
- Inflatable tongue for Difficult Airway simulation

complete with base, carina with bayonet lock and carrying bag

REF 30-29-000

**Bronchial tree acc. to Dr. Nakhosteen**
for connection to simulator „BILL”

REF 30-19-400

**BOB**
- ET Intubation
- Supraglottic airway insertion
- Mask ventilation
- Fiberoptic intubation
- Video laryngoscopy

complete with base and carrying bag

REF 30-30-000
Transparent Head
Cross section with upper airways
for demonstration and positioning of Laryngeal Tube # 3, 4 and iLTS-D # 4/5, in carrying bag

Crico-Trainer

Crico-Trainer “Adelaide”
The new system allows training of surgical cricothyrotomy techniques such as open and wire-guided cricothyrotomy. The special concept of skin with 2 layers is simulating the subcutaneous tissue and the cricothyroid membrane. It is designed to replicate difficult scenario thanks to the moveable chin. Complete with 5 skins

Crico-Trainer “Frova”
for cricothyrotomy and percutaneous tracheostomy, complete with 10 skins and 10 tracheas

Crico-Trainer “Pig”
for fixation of a real animal trachea
complete with 10 skins

Crico-Trainer “Pediatric”
complete with 10 skins
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### U
Universal – Cuff Pressure Gauge 13
VBM offers high quality devices in the field of airway management, accessories for anesthesia and intensive care, and tourniquet systems for surgical operations in a bloodless field.

VBM’s long term success is based on continuous innovation, outstanding quality, close collaboration with customers, suppliers and medical experts and, last but not least, 30 years of experience.

VBM has around 200 employees and markets products either through subsidiaries in the USA, France and the Czech Republic or through partners in over 100 countries.