



# ETVIEW

A clear view of airway management



**Tracheoscopic Ventilation Tube**  
Continuous Airway Monitoring

# ETView's TVT enables successful intubation in difficult situations and provides continuous airway monitoring.

## Improved airway management

Airway management ranks among the highest priorities in clinical care. Timely, effective and decisive airway management makes the difference between life and death.

Performed tens of millions of times annually, intubation presents challenges even for highly experienced health care practitioners including: difficult intubations, verifying tube position, and secretion management.

**ETView's tracheoscopic ventilation tube (TVT)<sup>™</sup>** is an endotracheal tube with an embedded camera that allows for continuous monitoring and visualization of the airways.

The images from the TVT can be viewed on any standard video monitor, or on ETView's dedicated display and recording monitors.

For ICU, OR, ER and pre-hospital use:

- Difficult intubations
- Verification of tube position
- Visualization and monitoring during airway access procedures
  - endobronchial blocker for selective unilateral lung breathing
  - percutaneous tracheotomy with uninterrupted ventilation
- Detection and pinpoint suctioning of secretions

Tracheoscopic Ventilation Tube (TVT): Endotracheal tube with embedded camera for continuous airway monitoring





## Continuous visualization of the airways

Intubated ICU patients are at a heightened risk for pneumonia.

Providing real-time continuous monitoring of the trachea, ETVIEW's TVT™ enables early detection and corrective action for tube displacement and secretion management. Identification and removal of secretions may reduce morbidity related to Ventilator Associated Pneumonia (VAP).\*

TVT usage may reduce hospitalization days attributed to these complications. In addition, the continuous monitoring capability may reduce the need for frequent and costly mobile chest X-rays for tube position verification.

100% verification of tube positioning



## Difficult Intubations

Although common practice, intubation is often traumatic, difficult and unsuccessful.

According to the American Society of Anesthesiologists:

"A difficult airway situation in a clinical setting is one in which a conventionally trained anesthesiologist experiences difficulty with mask ventilation, difficulty with tracheal intubation, or both."\*\*\*

By showing the larynx and entrance to the trachea on the monitor, the TVT may reduce the incidence of difficult intubations.

Difficult intubations are associated with high cost complications:

- Inadequate ventilation
- Tracheotomies, and related infections
- Damaged tissue and vocal chords from repeated intubation attempts
- Broken teeth due to laryngoscope force

\*From the School of Nursing (MLS, JFB) and Cardiopulmonary Sciences (JEL), Univ. of Central Florida, Orlando, Fla, and School of Nursing, West Virginia Univ., Morgantown, WV (CLO). "Suctioning Techniques and Airway Management Practices: Pilot Study and Instrument Evaluation"

\*\* <http://www.asahq.org/publicationsAndServices/Difficult%20Airway.pdf>



# The EView Intubation Trainer teaches airway management skills, builds confidence, and improves clinical performance.

## Training for improved intubation skills

Learning by doing deepens understanding. Effective intubation techniques can best be learned with hands-on experience that refines and improves not just technique, but knowledge as well.

The EView Intubation Trainer provides students a clear view of the anatomy to develop the skills necessary for successful intubation.

Using ordinary and “difficult to intubate” manikins, students can actually see – not just “sense” – the anatomy of the upper airway to sharpen their intubation skills. The EView Intubation Trainer provides a unique hands-on tool for all students and medical professionals, including nursing, EMT, and respiratory therapy.

The Intubation Trainer provides a continuous view of the upper airways, trachea, and main carina during intubation. Students and instructors alike can assess progress and techniques in real time, while recording the intubation for later critique and review.

The EView Intubation Trainer lets students see patient anatomy for enhanced intubation skills.



# Effective and cost-saving solution for airway management.

## Effective airway management with continuous airway visualization

Airway management ranks among the highest priorities in clinical care.

Timely, effective, and decisive airway management makes the difference between life and death.

## Reducing damage, increasing safety, and lowering healthcare costs

Reducing damage related to difficult intubations

- Torn and bruised tissue
- Asphyxiation
- Broken teeth

Increased safety

- Verify tube location
- Secretions monitoring
- Eliminate excessive X-rays
- Reduce number of tracheotomies

Lower healthcare costs

- Reduce liability costs associated with difficult intubation, extended hospitalization and morbidity
- Effective airway management in the ICU shortens hospital stay





# TVT technical specifications

## General

For single use only

For oral and nasal intubation procedures

**Weight of TVT:** 25 grams

FDA cleared

CE (MDD 93/42/EEC) certified

ISO 9001:2000 and ISO 13485:2003 compliant

U.S. and International patents

Model	TVT 7.0	TVT 7.5	TVT 8.0
Size			
ID (mm)	7.0	7.5	8.0
OD (mm)	10.0	10.5	11.0
Length (+2/-0mm)	312	323	323

## Materials

**Tube:** Medical grade PVC

Additional injection port for rinsing camera optics

**Cuff:** Medical grade PVC, high volume,  
low pressure

**Hardness of tube:** 85 shore A

## Electrical

**Power:** 55 mA +/- 5 mA @ DC 5 V

**Maximum current:** 60 mA

**Interface connector:** 4-pin 3.5 mm stereo jack

## Camera

**Image Sensor:** CMOS

**Resolution:** CIF 320 x 240

**Scan mode:** Progressive

**Depth of Field:** 12 mm – 60 mm

**Field of view:** ~85° diagonal

**Image sensitivity:** 0.7 V/(Lux x sec)

## Video

**Mode:** NTSC

**Signal:** composite video baseband signal (CVBS)

Direct interface with DVR/VCR/TV supporting  
NTSC-CVBS

## Light source

**LEDs:** 2 (white)

**LED Power:** 1mWatt=1lm

## Pack

**Clinical:** 10 per box

**Trainer:** 1



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