

# ALM

# inomed

## ADVANCED LARYNGEAL MONITORING



8  
CONTACT RECORDING

APPLICATION FIELD  
Thyroid surgery



C2 Xplore

C2 Xplore

One step ahead in IONM

Brain, Spine, Skull Base, and other surgical areas icons

## Reliability in recurrent laryngeal nerve monitoring

Combining the synergistic effects of individual key technologies, the unique **ALM technology** provides a reliable complete solution for RLN monitoring.

With 8 long measuring contacts, instead of the conventional 2 or 4 contacts, the **ALM Tube** offers optimal signal recording of the vocal muscle. The 360° surface sensor coverage ensures signal stability, independent from tube rotation. The innovative and user-friendly **Channel Select Software** always selects and displays the strongest signal precisely. All signals are displayed acoustically and visually via the **C2 Xplore**.

The C2 Xplore is known as a smart specialist for various surgical applications, and is the result of inomed's several years of experience and intensive research in the field of intraoperative neuromonitoring. Especially developed for use in thyroid surgery, the C2 Xplore offers reliability and optimal signal quality in RLN monitoring. These pioneering technologies build an end-to-end solution for innovative and seamless nerve monitoring.

Together with more than 30 years of expertise, ALM represents the most innovative cutting-edge technology in thyroid surgery to date.



## INTRAOPERATIVE NEUROMONITORING recommended by guidelines

Neuromonitoring is recommended for redo operation in thyroid surgery by the German Society for General and Visceral Surgery – German Association of Endocrine Surgeons.<sup>1</sup> Therefore, documenting the monitoring process and implementing it as rapidly and intuitively as possible are of critical importance in thyroid surgery. The C2 Xplore offers a 2D LED scanner to quickly read patient data from barcodes and even from QR codes, effortless integration of data into the patient management system, and many other possibilities for straightforward and fast reporting. The documentation process is supported by an integrated database, on which all measurement and patient data is stored on a long-term basis. The data can be subsequently recalled at any time.

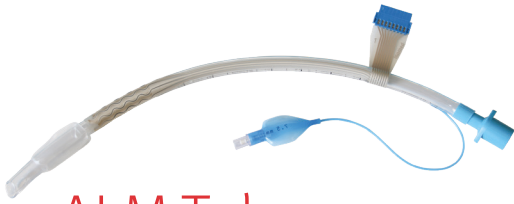
<sup>1</sup> Deutsche Gesellschaft für Allgemein- und Viszeralchirurgie e.V. (DGAV), Leitlinie Operative Therapie benigner Schilddrüsen-erkrankungen, Oktober 2015

### Advanced Laryngeal Monitoring

Smart technology for a new dynamic monitoring in thyroid surgery



## > RECORDING

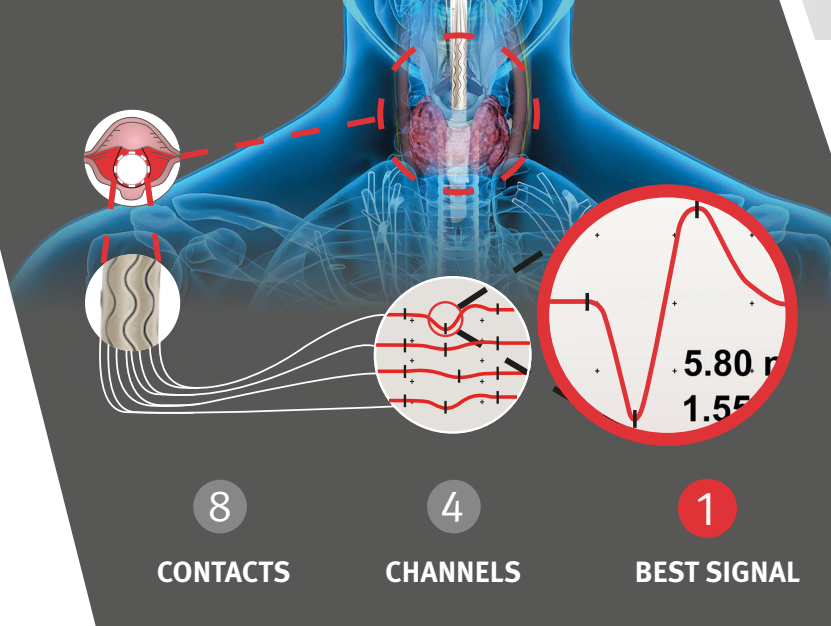


### ALM Tube

- >> **Multifunctional combination** of a clear PVC ET tube and a surface electrode delivers the best possible EMG signal recording from the vocal cords
- >> **Easy placement** of the recording electrode at the vocal cords is supported by an extended length of the sensor pads
- >> **Signal stability** resulting from the 360° surface sensor coverage with 8 long electrode contacts, even if the tube is rotated or shifted vertically
- >> **Clearly visible blue inflation line and pilot balloon** to aid the prevention of accidental cutting
- >> **Standard size tube**
- >> **Low profile surface and smooth bevelled tube tip**
- >> **Simple connection to monitoring system** thanks to a single connector
- >> **Multiple depth markers**
- >> **Cylindrical high volume, low pressure cuff**

## Laryngeal Electrode Select

- >> **Reliable signal recording** resulting from the 360° surface sensor coverage with 8 long measuring contacts
- >> **Signal stability** due to multiple channel recording and the automatic signal selection by the Select Software
- >> **Extended recording surface** allows easy placement at the vocal cords
- >> **Extraordinary value for money**
- >> Can be used **universally** on all PVC tubes

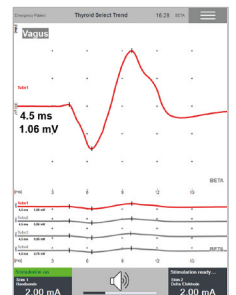


## ALM technology

## > SYSTEM

### Channel Select

- >> **Reliable detection** of muscle responses even under poor signal conditions
- >> **Automatic selection** of the optimal trace from the 4 recording channels of the Laryngeal Electrode Select or the ALM Tube



### HL7-ready

- >> Network communication based on the **HL7 standard** for synchronisation with the hospital management system







## » STIMULATION

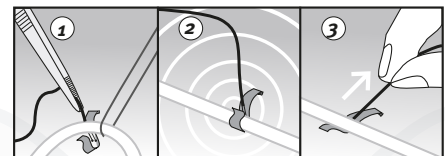
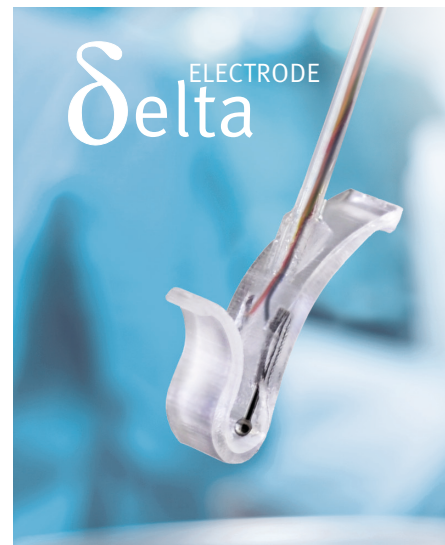
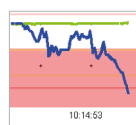
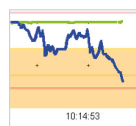
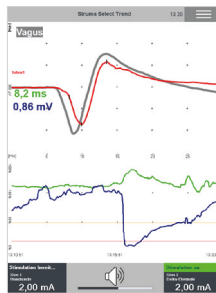
### DELTA-Electrode

- » **Easy positioning** on the vagus nerve
- » **Simple and secure application** on the vagus nerve ensures good contact resulting in a stable signal for continuous monitoring
- » **Easy removal from the vagus nerve** thanks to an optimised shape and elasticity of the electrode body

## Smart trend function

Continuous recurrent laryngeal nerve monitoring made simple. Trend and alarm functions help to **detect nerve irritations** and early signs of possible nerve impairment. The new nerve detection sound technology provides intuitive feedback for hand-guided stimulation and vagus monitoring.

**Up to three alarm thresholds** for amplitude and latency can be individually set up in the trend settings. If the limits are exceeded, the user will be notified about the signal changes visually and acoustically. The threshold values can be configured individually with relative or absolute values.



# ALM Features

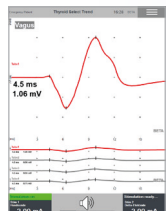
APPLICATION FIELD  
Thyroid surgery



8-contact **Laryngeal Electrode Select** for EMG signal recording at the vocal cords.

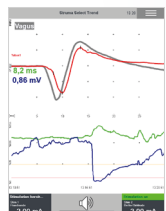


**ALM Tube** for signal stability – 8 recording contacts and automatic selection of the optimal channel due to the C2 Xplore.



The C2 Xplore with its **Channel Select Software** acquires, selects and displays the optimum muscle signal.

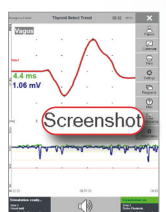
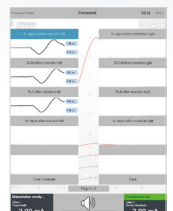
Stable and reliable continuous vagus monitoring thanks to the specially designed **DELTA-Electrode** from inomed.



**Smart trend software** feature including free configurable alarm thresholds for continuous vagus monitoring.

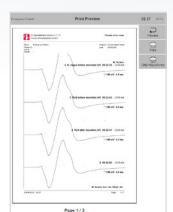


All stimulation responses are automatically stored on a long-term basis. Waveforms can be selected for the report during use via the intelligent **comment function** of the C2 Xplore. For the comment allocation, comments that have already been set are displayed in an intuitive manner.



**Screenshot function** for easy and quick creation of screenshots.

Following the surgery, a **patient report** can be created with one touch to be filed in the patient record at the press of a button. Reports can be generated with or without a trend graph.





Art. No. **508288**

### **C2 Xplore**

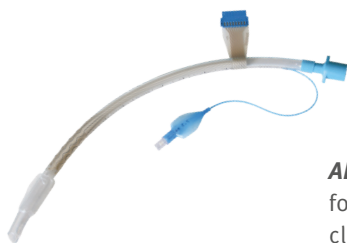
for intraoperative neuromonitoring. Easy-to-use 8-channel EMG monitor with 2 integrated stimulators, up to 6 application fields and digital integration in the OR, maximum interconnection online and offline. Mains lead and foot switch included. Can be used in combination with an application package.



Art. No. **508541**

### **Application package Thyroid and ENT with Channel Select for C2 Xplore**

Consisting of software license "Thyroid and ENT", Head Box and license for 4-channel recording.



### **ALM Tube**

for EMG recording, 4 channels, clear PVC tube, Murphy type, latex-free  
 › Single use  
 › EO sterilised



Art. No. **522623**

### **DELTA-Electrode with sterile connection cable**

Stimulation electrode for continuous vagus monitoring with sterile connection cable  
 › Single use  
 › EO sterilised

Art. No. **530845**

### **ALM Tube I.D. 7.0, O.D. 9.7** inner diameter of 7 mm

Art. No. **530846**

### **ALM Tube I.D. 7.5, O.D. 10.3** inner diameter of 7.5 mm

Art. No. **530847**

### **ALM Tube I.D. 8.0, O.D. 11.0** inner diameter of 8 mm



Art. No. **530855**

### **Laryngeal Electrode Select for tube with 6-7 mm inner diameter**

Adhesive surface 32x29.7 mm, electrode surface 685 mm<sup>2</sup>, with neutral adhesive electrode  
 › Single use  
 › EO sterilised

Art. No. **530856**

### **Laryngeal Electrode Select for tube with 7-9 mm inner diameter**

Adhesive surface 37x37.6 mm, electrode surface 1057 mm<sup>2</sup>, with neutral adhesive electrode  
 › Single use  
 › EO sterilised