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Introducing TCM4

Transcutaneous monitoring the easy way



SIMPLY DEDICATED

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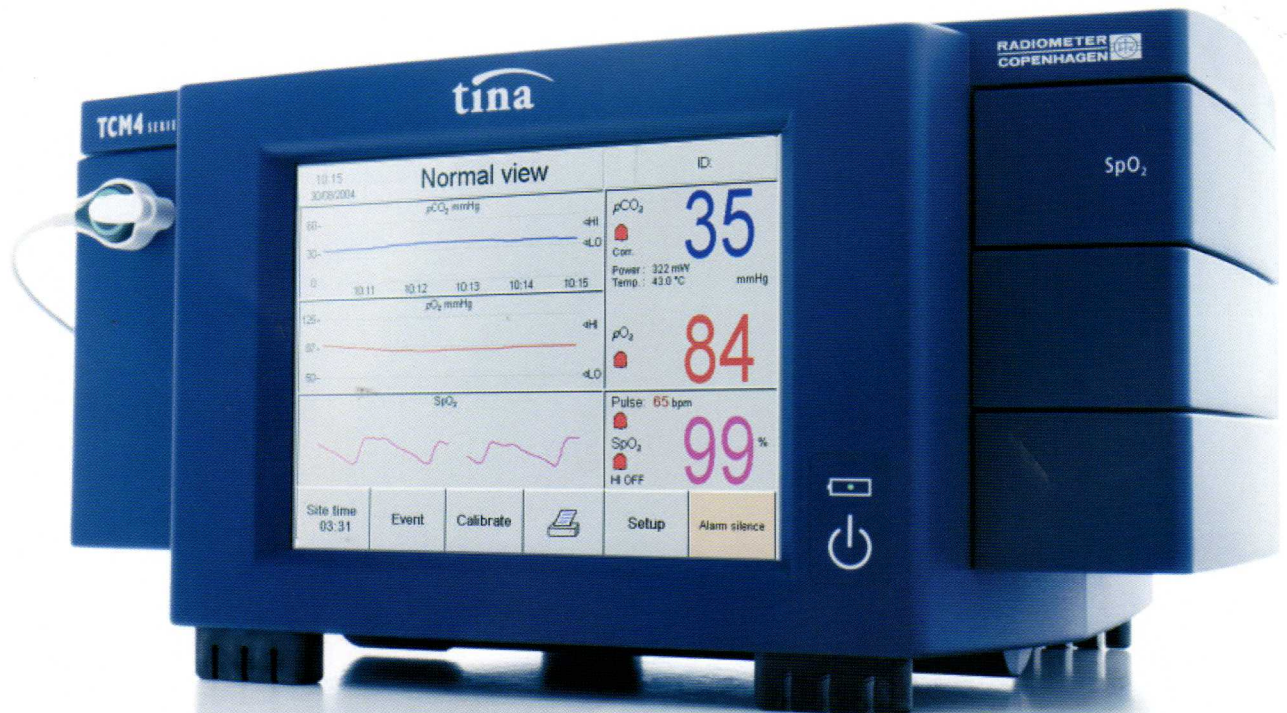
Extremely easy – totally reliable

Designed for busy hospital environments

Radiometer's TCM4 monitor is designed for busy neonatal wards and other departments evaluating respiratory status. It provides continuous transcutaneous pO_2 and pCO_2 information – patient status and trends – at a glance. Additional information is readily available with a touch on the screen.

Windows-based user-friendliness

TCM4 is the first standalone transcutaneous monitor to use Windows CE and touch screen technology. Its advanced software features include the possibility of entering patient ID, the marking of events and the choice of different data views for analyzing data. The user-friendly software makes it simple to operate – little or no training is needed.



TCM4



Electrode compatibility

- Combined $tc\text{pO}_2$ / $tc\text{pCO}_2$ or single $tc\text{pCO}_2$ electrode

Always ready to use

- SmartCal: Built-in function that ensures automatic calibration
- Integrated 1-point-calibration system secures reliable, reproducible measurements every time



Windows-based user interface

- Windows CE and touch screen technology for ease of use
- Requires minimal training
- On-screen video tutorials make it easy to teach new staff

Take it everywhere

- Built-in battery and flexible handle
- Lightweight
- Ideal for patient transport

Smart software features

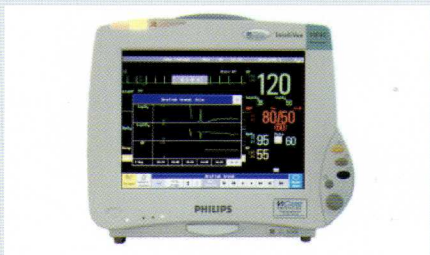
- Possibility of entering patient ID
- Marking of events
- Different data views for analyzing data

Data storage and output options

- Choice of analog or digital output
- Connection to PCs for downloading and storing data
- Connection to a standard printer for printing reports

Interface to monitoring systems

- Interface to major patient monitoring systems
- Automatic export of parameter and alarm limit values



Immediate detection of changes

Radiometer electrodes — fast, accurate and durable

The TCM4's solid-state transcutaneous pO_2/pCO_2 electrode is accurate and gives rapid response during measurements. The thin electrolyte layer and membrane promote a faster chemical reaction. This results in a short reaction time, ensuring immediate detection of changes in patient respiratory status.

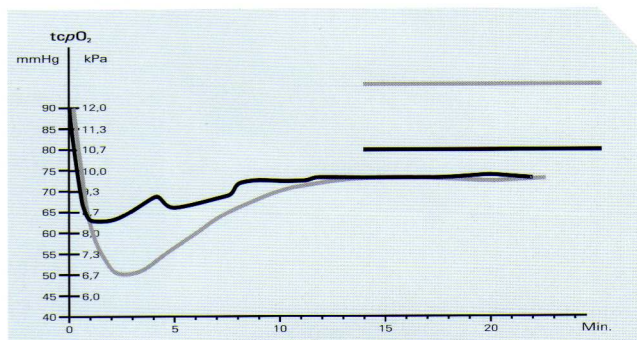
Radiometer electrodes are both tough and accurate. Due to the solid-state technology, they are highly resistant and can satisfy the demands of a busy hospital environment. This means reduced replacement costs as well as increased system reliability.

New SmartTrend for stable readings

With the new SmartTrend, TCM4 offers improved reliability and accuracy. By means of a unique algorithm, false alarms are minimized. This improves the stability of measurements, reflecting true physiological changes in patient status.

New SmartHeat for faster readings

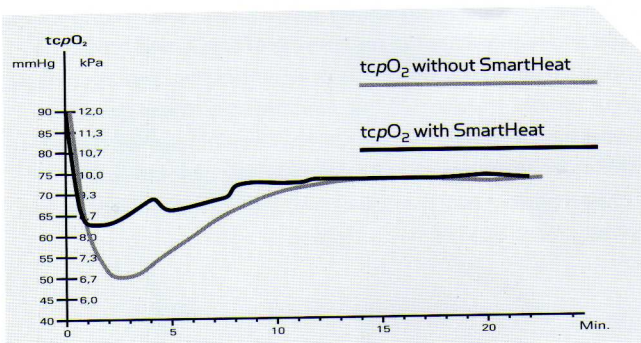
TCM4's SmartHeat option provides $tcpO_2$ readings faster than ever before. SmartHeat increases the electrode temperature by just one degree for the first five minutes, so that transcutaneous values are stabilized faster as a result of an increased initial arterialization of capillary blood flow [1].



¹ The effect of SmartHeat varies between patients.



SmartHeat stabilization curve



Fixation system for patient comfort

To improve patient comfort, Radiometer offers a unique fixation system. TCM4 electrodes can be temporarily removed while the fixation rings stay in place.

This makes site changing less stressful for the patient. Fixation rings do not need to be frequently removed as the electrode can be rotated between fixation rings.



Blood gas monitoring for neonates and adults

Close monitoring of neonates

The TCM4 is ideal for neonatal applications, where continuous, rapid and highly accurate monitoring of $tcPO_2$ and $tcPCO_2$ is critical. In neonates, blood is a scarce resource, and as changes occur rapidly, transcutaneous monitoring of the respiratory status has become a standard procedure in neonatal departments. Trend curves and the user-friendly interface make TCM4 a perfect tool for nurses and physicians monitoring the development of a premature infant.



Diagnosis of sleep disorders

In sleep centers, transcutaneous monitoring is primarily used to assess the status of patients suffering from CO_2 -retention during sleep, chronic hypercapnia and terminal respiratory insufficiency. Transcutaneous monitoring of pCO_2 during sleep adequately reflects whether a patient suffers from hypoventilation with hypercapnia.

To meet the specific needs of sleep centers, the TCM4 provides an analog output for the transfer of data to polysomnographs.



Monitoring respiratory status in adult patients

Transcutaneous monitoring of $p\text{CO}_2$ is an easy and reliable way of monitoring the respiratory status of spontaneously breathing patients. It provides an early warning and improves patient comfort by reducing the need for arterial blood samples.

For these reasons, transcutaneous monitoring is often used in adult intensive care units, postanesthesia units, step-down units, pulmonary function labs and respiratory departments. With its portability and reliability, the TCM4 is perfect for sharing between these departments.



Get the most out of transcutaneous monitoring

For more information on Radiometer's transcutaneous monitors and support services, visit www.radiometer.com.

Radiometer's knowledge site

For practical information on blood gas testing in neonates and adults, visit www.bloodgas.org.

For information on the different applications of transcutaneous monitoring, visit www.radiometer.com/tc.

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Contact information:

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