TCM400
The information you need to make the right decision
Making the right decision

Non-invasive and quantitative
By non-invasively providing quantitative information about cutaneous oxygenation and perfusion, transcutaneous oxygen measurements become a valuable diagnostic tool for the assessment of peripheral vascular disease. For the busy clinician, it is an essential support system in the rush of daily decision making.

Accurate mapping of the measuring site
The TCM400 is the only portable monitor to provide up to six simultaneous measurements of transcutaneous oxygen tension (tcpO₂).

The more measurement sites, the more information for the clinician. Together, the measurements provide an accurate mapping of the site and thus a better foundation for diagnosing and deciding on the most appropriate course of treatment.

The TCM400 is easy to use and allows you to extract more information from your measurements and to make the most of your time.
TCM400 Multichannel monitor
- Transcutaneous tcpO₂ multichannel monitor
- One to six measuring modules
- Low-drift and rapid-response electrodes
- Electrode temperature range available from 37 to 45 °C

Always ready
- Integrated 1-point calibration system
- Calibration completed within 2-3 minutes
- Calibration of all six electrodes by pressing one button

Easy to use
- Windows-based user interface
- Touch screen
- On-screen video tutorials
- Minimal training required

Take it everywhere
- Built-in battery
- Compact and lightweight
- Flexible handle
- Click-and-go modules. Upgrade your system whenever you need to.

Make the most of information
- Patient information is automatically linked to measurements
- Type in patient name and ID by using on-screen keyboard
- Marking of predefined events
- Different data views for analyzing data
- Automatic calculation of regional perfusion index (RPI)

Data storage and output options
- Connection to PCs for downloading and storing data
- Connection to a standard USB printer for printing reports
- Analyze data and generate reports through dedicated PC software
Making the most of your time

Easy-to-read color display
The large 6½" color touch screen display makes interaction with the TCM400 straightforward. Each electrode can be color-coded, making it easy to keep track of individual measurements. The size of the screen makes it possible to view all six measurements simultaneously.

Intuitive operation
The combination of touch screen and a user-friendly Windows CE software makes the TCM400 intuitive and easy to work with. Minimum training is required and operators have full access to on-screen video tutorials, ensuring trouble-free operation of the monitor.

Simple and accurate calibration
An internal barometer registers the atmospheric pressure and automatically calculates the correct calibration value, ensuring reliable and reproducible measurements. Calibration of all six electrodes is initiated by pressing one button and is completed within 2-3 minutes.

Portable and fully customizable
The flexible handle combined with a built-in battery and a compact and lightweight design make it easy to move TCM400 around in the hospital to wherever it is needed.

TCM400 has been designed as a completely modular system. Customize the monitor to meet your needs by choosing from one to six measuring modules. The click-and-go modules make it easy for you to upgrade your monitor with additional modules along the way.
Principle of transcutaneous oxygen
Transcutaneous oxygen (tcpO₂) is a non-invasive monitoring of the oxygen tension in the skin. A Clark-type electrode is placed on the skin and heated. The heat from the electrode dilates the underlying capillaries, increases the local perfusion and opens the pores of the skin. O₂ diffuses through the skin to the electrode where pO₂ generates a current which is measured and tcpO₂ values are provided on the monitor.

tcpO₂ is a direct indication of the microvascular function. As opposed to pressure and volume assessments, tcpO₂ maps the actual oxygen supply available for the skin tissue cells. tcpO₂ also responds to macrocirculatory events, e.g. change in blood pressure and provocational maneuvers.

Electrodes with superior performance
Radiometer electrodes are renowned for their measuring accuracy as well as their durability and ease of use in clinical practice. They show demonstrably low drift and rapid response during measurements. The pO₂ part of the electrodes has an extremely low oxygen consumption, which makes it possible to obtain reliable measurements at sites of the body with poor perfusion.
No mix-ups
With the TCM400, you can match the correct patient with the correct measurement. Once you begin measuring, just enter the patient’s name or ID using the on-screen keyboard and the information will be linked to that measurement.

Patient Data Management System
The Patient Data Management System (DMS) manages all session/patient ID data, and it helps reducing the risk of patient data mix-up.

A session is a collection of data starting when the first electrode is removed from the calibration chamber and ending when the last electrode is placed back in the calibration chamber. Each session gets a unique number, which can be linked to a specific patient ID at any time. It is thereby possible to link several sessions to the same patient ID.

From the Patient DMS screen it is possible to:
• change the automatically generated session number to a unique patient ID
• view data from a session in the Trend table or Trend curve view
• print one or more reports
• export one or more sessions
• delete sessions
• see detailed information about a session

Visualize information
Trends can be displayed and printed in both graphical and tabular formats and you can mark events in your measurement protocol at the touch of a button by choosing from a predefined list.

Application of RPI
The regional perfusion index (RPI) is a practical method used to eliminate cardio-respiratory influence and simplify the tcpO₂ interpretation. The regional perfusion index is automatically calculated on the TCM400 and can be used to quantify tissue perfusion in peripheral vascular disease. The RPI is defined as the relationships between extremity and chest wall tcpO₂: limb tcpO₂ is thereby normalized to chest values.

Calculation of RPI
RPI = tcpO₂ (limb) / tcpO₂ (chest)

RPI = 35 mmHg / 85 mmHg = 0.41

Prediction of wound healing
RPI ≤ 0.4 predicts a poor outcome
RPI ≥ 0.6 predicts an excellent outcome
0.4 < RPI < 0.6 some heal and some do not

Hard-copy documentation
TCM400 reports can easily be printed to provide you with the necessary documentation of your measurements. You can print information as viewed on screen, saving you time and removing the risk of errors associated with handwritten reports. The Patient DMS enables you to simply mark the sessions of your patients that you wish to print out and all the data is then sent to the printer. You can connect a standard USB printer to the TCM400.

Convenient storage and transfer of data
The internal memory ensures storage of measurement information for later review or printout. Data can also be exported to a database, spreadsheet application or dedicated PC software for further analysis and report generation. The memory function stores up to 48 hours of accumulated measuring data, which can be recalled whenever it is needed. The only way data is automatically deleted is when the memory is full. In order to store a new session, the oldest session will be deleted.
Make the most of transcutaneous monitoring
For more information on Radiometer’s transcutaneous monitors and support services, visit www.radiometer.com/tc.

For more clinical information on transcutaneous monitoring, visit www.bloodgas.org.

Simpler, faster, better

Radiometer’s products and services simplify and automate all phases of acute care testing, providing you with the speed and ease of use you want and the accuracy you need.

This is acute care testing truly made simpler, faster and better.

Sales companies:

<table>
<thead>
<tr>
<th>Country</th>
<th>Radiometer representative</th>
<th>Telephone</th>
<th>E-mail</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Radiometer Pacific Pty. Ltd.</td>
<td>(+61) 3 9259 2222</td>
<td><a href="mailto:sales@radiometer.com.au">sales@radiometer.com.au</a></td>
<td><a href="http://www.radiometer.com.au">www.radiometer.com.au</a></td>
</tr>
<tr>
<td></td>
<td>Radiometer Canada</td>
<td>(+1) 877 414 0447 (toll free)</td>
<td><a href="mailto:info@radiometercanada.com">info@radiometercanada.com</a></td>
<td><a href="http://www.radiometer.ca">www.radiometer.ca</a></td>
</tr>
<tr>
<td></td>
<td>Radiometer China</td>
<td>(+86) 21 6128 6466</td>
<td><a href="mailto:pol@radiometer.com.cn">pol@radiometer.com.cn</a></td>
<td><a href="http://www.radiometer.cn">www.radiometer.cn</a></td>
</tr>
<tr>
<td></td>
<td>Radiometer Danmark</td>
<td>(+45) 38 27 28 29</td>
<td><a href="mailto:rdan@radiometer.dk">rdan@radiometer.dk</a></td>
<td><a href="http://www.radiometer.dk">www.radiometer.dk</a></td>
</tr>
<tr>
<td></td>
<td>Radiometer S.A.S.</td>
<td>(+33) 1 49 44 35 50</td>
<td><a href="mailto:marketing@radiometer.fr">marketing@radiometer.fr</a></td>
<td><a href="http://www.radiometer.fr">www.radiometer.fr</a></td>
</tr>
<tr>
<td></td>
<td>Radiometer GmbH</td>
<td>(+49) 2154 8180</td>
<td><a href="mailto:info@radiometer.de">info@radiometer.de</a></td>
<td><a href="http://www.radiometer.de">www.radiometer.de</a></td>
</tr>
<tr>
<td></td>
<td>Radiometer Ireland Ltd.</td>
<td>(+353) 1 888 3611</td>
<td><a href="mailto:sales@radiometer.ie">sales@radiometer.ie</a></td>
<td><a href="http://www.radiometer.ie">www.radiometer.ie</a></td>
</tr>
<tr>
<td></td>
<td>Radiometer K.K.</td>
<td>(+81) 3 5777 3500</td>
<td><a href="mailto:salesdep@radiometer.co.jp">salesdep@radiometer.co.jp</a></td>
<td><a href="http://www.radiometer.co.jp">www.radiometer.co.jp</a></td>
</tr>
<tr>
<td></td>
<td>Radiometer Nederland BV</td>
<td>(+31) 79 361 4593</td>
<td><a href="mailto:info@radiometer.nl">info@radiometer.nl</a></td>
<td><a href="http://www.radiometer.nl">www.radiometer.nl</a></td>
</tr>
<tr>
<td></td>
<td>Radiometer New Zealand</td>
<td>(+64) 9 574 1400</td>
<td><a href="mailto:sales@radiometer.nl.co.nz">sales@radiometer.nl.co.nz</a></td>
<td><a href="http://www.radiometer.co.nz">www.radiometer.co.nz</a></td>
</tr>
<tr>
<td></td>
<td>Radiometer Sp. z o. o.</td>
<td>(+48) 22 518 02 40</td>
<td><a href="mailto:info@radiometer.pl">info@radiometer.pl</a></td>
<td><a href="http://www.radiometer.pl">www.radiometer.pl</a></td>
</tr>
<tr>
<td></td>
<td>Radiometer Ibérica, S.A.</td>
<td>(+351) 214 32 39 70</td>
<td><a href="mailto:rapor@radiometer.es">rapor@radiometer.es</a></td>
<td><a href="http://www.radiometer.pt">www.radiometer.pt</a></td>
</tr>
<tr>
<td></td>
<td>Radiometer Ibérica, S.A.</td>
<td>(+34) 91 655 99 50</td>
<td><a href="mailto:resp@radiometer.es">resp@radiometer.es</a></td>
<td><a href="http://www.radiometer.es">www.radiometer.es</a></td>
</tr>
<tr>
<td></td>
<td>Radiometer GmbH</td>
<td>(+41) 44 723 38 60</td>
<td><a href="mailto:info@radiometer.ch">info@radiometer.ch</a></td>
<td><a href="http://www.radiometer.es">www.radiometer.es</a></td>
</tr>
<tr>
<td></td>
<td>Radiometer Ltd.</td>
<td>(+44) 1293 517 599</td>
<td><a href="mailto:sales@radiometer.co.uk">sales@radiometer.co.uk</a></td>
<td><a href="http://www.radiometer.com">www.radiometer.com</a></td>
</tr>
<tr>
<td></td>
<td>Radiometer America Inc.</td>
<td>(+1) 800 736 0600 (toll free)</td>
<td><a href="mailto:info@radiometeramerica.com">info@radiometeramerica.com</a></td>
<td><a href="http://www.radiometeramerica.com">www.radiometeramerica.com</a></td>
</tr>
<tr>
<td></td>
<td>Radiometer International</td>
<td>(+45) 38 27 38 27</td>
<td><a href="mailto:isd@radiometer.dk">isd@radiometer.dk</a></td>
<td><a href="http://www.radiometer.com">www.radiometer.com</a></td>
</tr>
</tbody>
</table>

Other countries: Radiometer International Sales Division

Sales companies:

Australia: Radiometer Pacific Pty. Ltd.
Canada: Radiometer Canada
China: Radiometer China
Denmark: Radiometer Danmark
France: Radiometer S.A.S.
Germany: Radiometer GmbH
Ireland: Radiometer Ireland Ltd.
Japan: Radiometer K.K.
The Netherlands: Radiometer Nederland BV
New Zealand: Radiometer New Zealand
Poland: Radiometer Sp. z o. o.
Spain: Radiometer Ibérica, S.A.
Switzerland: Radiometer GmbH
United Kingdom: Radiometer Ltd.
USA: Radiometer America Inc.
Other countries: Radiometer International Sales Division

Telephone: (+61) 3 9259 2222
(+1) 877 414 0447 (toll free)
(+86) 21 6128 6466
(+45) 38 27 28 29
(+33) 1 49 44 35 50
(+49) 2154 8180
(+353) 1 888 3611
(+81) 3 5777 3500
(+31) 79 361 4593
(+64) 9 574 1400
(+48) 22 518 02 40
(+351) 214 32 39 70
(+34) 91 655 99 50
(+41) 44 723 38 60
(+44) 1293 517 599
(+1) 800 736 0600 (toll free)
(+45) 38 27 38 27

E-mail: sales@radiometer.com.au
info@radiometercanada.com
pol@radiometer.com.cn
rdan@radiometer.dk
marketing@radiometer.fr
info@radiometer.de
sales@radiometer.ie
salesdep@radiometer.co.jp
info@radiometer.nl
sales@radiometer.nl
sales@radiometer.nl
sales@radiometer.nl
sales@radiometer.nl
info@radiometer.nl
sales@radiometer.co.uk
info@radiometeramerica.com
isd@radiometer.dk

Sales Division

Data subject to change without notice.
Radiometer, the Radiometer logo, ABL, AQT, TCM, RADIANCE, PICO and CLINITUBES are trademarks of Radiometer Medical ApS.