

# TCM4 and TCM40

## Specifications

### Hardware

#### Computer specifications

CPU: AMD ETX LX800, 500 MHz (Pentium Class)  
 RAM: 128 MB  
 Software platform: Windows CE 5.0  
 Startup time: max 1 min

#### Operating conditions

Operating environment: 12-28 °C / 54-82 °F  
 Built-in barometer:  
 Range: 375-825 mmHg or 50-110 kPa  
 Accuracy: ±5 mmHG or 0.67 kPa  
 Power: 100-240 V, 50-60 Hz, 70 VA (max.)  
 Built-in battery:  
 Rechargeable Pb battery  
 Typical operating time: 1 hour per charge at 25 °C

### Software

#### Measuring range

Transcutaneous carbon dioxide tension/tcpCO<sub>2</sub>:  
 5-100 mmHg or 0.7-13.3 kPa  
 Transcutaneous oxygen tension/tcpO<sub>2</sub>:  
 0-800 mmHg or 0.0-99.9 kPa  
 Oxygen saturation/SpO<sub>2</sub>: 70-100%  
 Pulse rate: 20-250 bpm  
 Sensor heating power: 10-650 mW

#### Calibration

Automatic calibration  
 Calibration gas: 7.5% CO<sub>2</sub> and 20.9% O<sub>2</sub>, balanced N<sub>2</sub>  
 4-hour calibration interval recommended

#### Patient data storage

Up to 48 hours of measuring data in 2-sec data intervals  
 Reviewing trends on screen  
 Download of stored patient data to PC or printer

### Dimensions

#### TCM monitor

Width	30.8 cm	12.1 in
Depth	23 cm	9.1 in
Height	16 cm	6.3 in
Weight	4 kg	8.8 lbs

#### Display

Screen: 6.5 color touch TFT, full VGA (640 x 480)  
 Display options: normal view (numeric), trend table, trend curve  
 Display update period: every 2 seconds

#### Interface connections

Serial output: EIA232 (RS232)  
 Analog output: 0-1000 mV  
 Printer output: USB2.0 (compliant with USB 1.1)  
 Printer protocol: HP PCL3  
 Printer reports: trend table, trend curve  
 Data protocol: Vuelink, Monlink

#### Site timer

Indication of remaining measuring time  
 Measuring time elapsed: clock triggers an alarm and sensor temperature is off

#### Alarm level

Alarm sound: high 83 dBA  
                   low 65 dBA  
 Alert tone: high 73 dBA  
                   low 58 dBA

#### Languages

Chinese, Danish, Dutch, English, French, German, Japanese, Italian, Polish, Portuguese, Russian, Spanish and Swedish

#### Combi module

Width	14.5 cm	5.7 in
Depth	14.8 cm	5.8 in
Height	10.7 cm	4.2 in
Weight	0.575 kg	1.3 lbs

#### SpO<sub>2</sub> module

Width	14.5 cm	5.7 in
Depth	14.8 cm	5.8 in
Height	3.5 cm	1.4 in
Weight	0.21 kg	0.5 lb

# tc Sensor E5260 (tcpCO<sub>2</sub>), E5280 (tcpCO<sub>2</sub>, tcpO<sub>2</sub>) and E5480 (tcpCO<sub>2</sub> tcpO<sub>2</sub>)

## Sensor specifications

### Measuring principle

Clark-type pO<sub>2</sub> sensor:  
O<sub>2</sub> cathode 25 µm: platinum  
O<sub>2</sub> anode (reference): silver  
Stow-Severinghaus-type pCO<sub>2</sub> sensor:  
CO<sub>2</sub> sensor: pH solid-state glass electrode  
CO<sub>2</sub> anode (reference): silver chloride

### Sensor temperature

Selectable between 37-45 °C in steps of 0.5 °C  
Automatic temperature off when site time is elapsed

### Sensor remembraning requirements

Every 7 days  
Built-in alert when sensor needs remembraning

### Sensor performance (in vitro)

Conditions: sensor temperature of 43 °C  
**tc Sensor E5260 and E5280**  
Response time: tcpO<sub>2</sub> - 18 sec, tcpCO<sub>2</sub> - 26 sec  
Drift: tcpO<sub>2</sub> within ±5 % over calibration interval tcpCO<sub>2</sub> within ±10 % over calibration interval

Conditions: sensor temperature of 43 °C  
**tc Sensor E5480**  
Response time: tcpO<sub>2</sub> - 23 sec, tcpCO<sub>2</sub> - 61-83 sec  
Drift: tcpO<sub>2</sub> within ±5 % over calibration interval tcpCO<sub>2</sub> within ±10 % over calibration interval

### Sensor dimensions

#### E5260 and E5280

#### E5480

Electrode housing (diameter)	15 mm	0.59 in	15 mm	0.59 in
Silver body (diameter)	9.1 mm	0.36 in	8.1 mm	0.32 in
Height	11.3 mm	0.44 in	7.81 mm	0.3 in
Weight	2.9 g	0.1 oz	2.6 g	0.09 oz
Sensor cable length	3 m	9.8 ft	3 m	9.8 ft

### Accessories

904-891 fixation rings for tc Sensor E5260 and E5280  
905-836 fixation rings for tc Sensor E5480  
905-901 large fixation rings for tc Sensor E5480  
904-892 membranes for tc Sensor E5260 and E5280  
905-805 membranes for tc Sensor E5480  
962-187 gas (962-188 for US and Canada)

### Biocompatibility

All materials are latex-free

## Compliance

Patient safety The instruments comply with IEC 60601-1, IEC 60601-1-2, IEC 60601-2-23, IEC 60601-3-1, IEC 60601-1-8, ISO 9919  
The following test house has approved the instrument: CSA in Canada according to CAN/CSA-C22.2 No. 601.1-M90, 601.1S1-94, 601.1B-98, 601.2.23-98 and UL std. No. 60601-1.

Type BF equipment (body floating)

US Federal law restricts this device to sale, distribution, or use by or on order of a physician

EMC Compliance with requirements EMC is ensured by fulfilling the requirements of the standards IEC 60601-1-2, IEC 60601-2-23.

Performance This product complies with the IEC 60601-2-23, IEC 60601-3-1.



no. 0459

This product complies with the requirements of the Medical Device Directive 93/42/EEC June 1993

## Contact us

Radiometer is represented in more than 100 countries.  
For the local Radiometer representative nearest you, please go to [www.radiometer.com](http://www.radiometer.com).

Data subject to change without notice.

Radiometer, the Radiometer logo, ABL, AQT, TCM, RADIANCE, PICO and CLINITUBES are trademarks of Radiometer Medical ApS.