



# SunTech<sup>®</sup> CT50<sup>™</sup>

BP + VITALS



Vital Signs Monitor  
with BP, Temperature\* and SpO<sub>2</sub>\*

\*Temperature & SpO<sub>2</sub> optional

# SunTech CT50

The CT50 vital signs monitor easily provides reliable blood pressure (BP), SpO<sub>2</sub>, and temperature measurements for neonatal, pediatric, and adult patients. Intervals can be set to automatically take BP readings, and clinical alarms can be programmed for each parameter. The CT50 uses SunTech's trusted Advantage™ BP technology, and offers industry-leading Masimo SET® pulse oximetry, as well as Covidien Filac 3000 temperature. Innovative features such as BP averaging and HL7 messaging are included. The intuitive, touch-screen interface provides users all of the necessary features for reviewing, analyzing, and transferring vital signs data.

**Reliable:** Uses SunTech Advantage™ BP, the market-leading clinical-grade automated BP technology, optional Covidien FILAC 3000 Digital Thermometry, and optional Masimo SET Pulse Oximetry.

**Accurate:** Averaging Mode allows clinicians to automate the process of taking and averaging multiple office BP measurements. This process has been shown to improve the quality and accuracy of office BP measurements while reducing or eliminating white coat response.<sup>1-3</sup>

**Connected:** Connects to a network via ethernet or optional WiFi. Uses industry standard HL7 IHE profiles to facilitate communication of patient information and measurement data with the EMR. Built-in memory can store over 1000 patients and 5000 measurement events.

**Flexible:** Portable design with a rechargeable lithium-ion battery capable of over 8 hours of continuous operation<sup>4</sup>.

**Easy to Use:** Intuitive user interface with simple icons and clear 8 inch LCD touch-screen display (800 x 600 pixels).

<sup>1</sup>Beckett L, Godwin M. The BpTRU automatic blood pressure monitor compared to 24-h ambulatory blood pressure in patients with hypertension. BMC Cardiovasc Disord. 2005;5:18.

<sup>2</sup>Myers MG. Automated blood pressure measurement in routine clinical practice. Blood Press Monit. 2006;11:59-62.

<sup>3</sup>Myers MG, Validwiso M, Kiss A. Use of automated office blood pressure measurement to reduce the white coat response. J Hypertens. 2009;27:280-286.

<sup>4</sup>New, fully-charged battery at 25°C ambient temperature, using continuous SpO<sub>2</sub>, NIBP on AUTO mode for 15 minute intervals, & taking a digital temperature measurement every 15 min.

## Accessories

- Deluxe Mobile Stand: High quality, hospital-grade mobile stand with basket and lockable, anti-static casters.
- Barcode Scanner: For easily scanning patient information into the CT50.
- USB WiFi Dongle: For wireless networking and mobility.
- Printer: To instantly print readings at device.

## Technical Specifications

### Environmental Specifications

Operating temperature	+5°C to +40°C
Operating humidity	15% to 85% (non condensing)
Transportation and storage temperature	-20°C to +55°C
Transportation and storage humidity	10% to 93% (non condensing)

### Power Specifications

Input voltage	100V-240V AC
Frequency	50Hz/60Hz
Input current	0.7A-1.5A

### Physical Specifications

Size (WxHxD)	314mm x 132mm x 239mm
Weight (Includes lithium battery, with no accessories)	<4kg

### Hardware Specifications

Battery		Connectors		Data Storage	
Type	Rechargeable lithium ion	Power	1 x AC power inlet	Number of Patients	>1,000
Size	200mmx57mmx24mm	Wired network	1 x RJ45 interface	Measurement Events	>5,000
Weight	< 360 g	USB	4 x USB	Alarm Events	>100,000
Rated voltage	10.8 VDC	Equipotential ground	1	Log Events	>10,000
Capacity	6600 mAh	Nurse call	1 x RJ11 interface		
Operating time*	> 8 hours	DC output	1 x 15V/1.2A		
Charge time	6h to 100% (while powered off)				

\*One new and fully charged battery at 25° C ambient temperature, with NIBP in AUTO mode set for 15 minute interval, continuous SpO<sub>2</sub>, and taking manual Temp every 15 minutes.



## Measurement Specifications

### Pulse Oximetry (SpO<sub>2</sub>)

SpO <sub>2</sub>	Masimo SET	Standard
Measurement Range	0% to 100%	0% to 100%
Resolution	1%	1%
Accuracy	70% to 100%: ±2% (adult/pediatric, non-motion conditions) 70% to 100%: ±3% (neonate, non-motion conditions) 70% to 100%: ±3% (motion conditions) 0% to 69%: unspecified	70% to 100%: ±2% 40~69% : ± 3% 0% to 39%: unspecified
Average Time	2-4s, 4-6s, 8s, 10s, 12s, 14s, 16s	Normal: 8s, Slow: 16s, Fast: 4s
Update Period	<30s	<30s
Time After Defibrillation	<5s	<5s
<b>Pulse Rate</b>		
Measurement Range	25 bpm to 240 bpm	20 bpm to 250 bpm
Resolution	1 bpm	1 bpm
Accuracy	±3 bpm (non-motion conditions) ±5 bpm (motion conditions)	±1% or ±1 bpm, whichever is greater

Note : The Masimo SPO<sub>2</sub> sensor for adult/pediatric/neonate has been validated for motion accuracy in human blood studies on healthy adult volunteers in induced hypoxia studies while performing rubbing and tapping motions at 2 to 4 Hz at an amplitude of 1 to 2 cm and a non-repetitive motion between 1 to 5 Hz at an amplitude of 2 to 3 cm in induced hypoxia studies in the range of 70-100% SPO<sub>2</sub> against a laboratory co-oximeter and ECG monitor. 1% has been added to the results to account for the effect of fetal hemoglobin. This variation equals plus or minus one standard deviation. Plus or minus one standard deviation encompasses 68% of the population.

### Covidien Filac 3000 Thermometer

Measurement Range	30.0°C - 43.0°C
Measurement Site	Oral, Axillary, Rectal
Measurement Modes	- Direct Mode (all sites, direct measurement) - Standard Mode (Axillary/Rectal, calculated) - Quick Mode (Oral, calculated)
Unit of Measure	°C, °F
Resolution	0.1°C/°F
Accuracy	Quick Mode (Oral): ± 0.3°C (Axillary/Rectal): ± 0.1°C
Standard Mode	± 0.1°C
Direct Mode	± 0.1°C
Measurement Time	Quick Mode (Oral): 6s - 10s
Standard Mode	- (Axillary) 10s - 14s - (Rectal) 14s - 18s
Direct Mode (All Sites)	60s - 120s

### SunTech Advantage NIBP

Measurement Range	Adult Child Neonate	SYS 40~260 mmHg SYS 40~160 mmHg SYS 40~130 mmHg	DIA 20~200 mmHg DIA 20~160 mmHg DIA 20~100 mmHg
Pressure Accuracy		±3 mmHg over full range in operating conditions	
Unit of Measure		mmHg, kPa	
Recovery Time After Defibrillation		<5s	
Pulse Rate Range		30 ~ 220 bpm	
Pulse Rate Accuracy		± 2% or ± 3 bpm, whichever is greater	
Intervals for AUTO Measurement		5min to 240min	
Measurement Modes	Adult Child Neonatal	Manual, AUTO, STAT, Average Manual, AUTO, STAT, Average Manual, AUTO	

## Limited Warranty

SunTech Medical, Inc. provides to the original purchaser the following limited warranty from date of invoice:

Main unit, SpO <sub>2</sub> modules, temp modules:	2 years
OPD Blood Pressure Cuffs:	2 years
Accessories (SpO <sub>2</sub> sensors, temp probes, BP hose, etc):	90 days



Masimo SET® SpO<sub>2</sub>  
(preferred)

Covidien Filac® 3000  
Thermometry

Standard SpO<sub>2</sub>

USB Ports on Front and Side for  
Barcode Scanner and Wi-Fi

Thermal  
Printer

Mobile Stand

 **SunTech Medical**<sup>®</sup>  
The Difference In Clinical Grade<sup>®</sup>

With more than 30 years dedicated to developing our world-class blood pressure technology, we are confident that we don't miss a beat - so you won't either. It's our legacy. It's SunTech Medical. **It's The Difference In Clinical Grade.**

  
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## SunTech CT50 Part Numbers

### CT50 Monitor Configurations\*

- 99-0130-02 SunTech CT50, BP, Masimo SpO<sub>2</sub> (includes Masimo M-LNCS DCI Adult SpO<sub>2</sub> Reusable Sensor 2501, and SpO<sub>2</sub> Adapter Cable)
- 99-0130-03 SunTech CT50, BP, Masimo SpO<sub>2</sub>, Printer (includes Masimo M-LNCS DCI Adult SpO<sub>2</sub> Reusable Sensor 2501, SpO<sub>2</sub> Adapter Cable, 1 roll thermal paper)
- 99-0130-06 SunTech CT50, BP, Nellcor Comp. SpO<sub>2</sub> (includes Nellcor compatible Adult SpO<sub>2</sub> Reusable Sensor, and SpO<sub>2</sub> Adapter Cable)
- 99-0130-07 SunTech CT50, BP, Nellcor Comp. SpO<sub>2</sub>, Printer (includes Nellcor compatible Adult SpO<sub>2</sub> Reusable Sensor, and SpO<sub>2</sub> Adapter Cable, 1 roll thermal paper)
- 99-0130-10 SunTech CT50, BP, Masimo SpO<sub>2</sub>, Temp (includes Masimo M-LNCS DCI Adult SpO<sub>2</sub> Reusable Sensor 2501, SpO<sub>2</sub> Adapter Cable, Reusable Oral Temp Probe, 5 Box of 20 probe covers)
- 99-0130-11 SunTech CT50, BP, Masimo SpO<sub>2</sub>, Temp, Printer (includes Masimo M-LNCS DCI Adult SpO<sub>2</sub> Reusable Sensor 2501, SpO<sub>2</sub> Adapter Cable, Reusable Oral Temp Probe, 5 Box of 20 probe covers, 1 roll thermal paper)
- 99-0130-14 SunTech CT50, BP, Nellcor SpO<sub>2</sub>, Temp (includes Nellcor-compatible Adult SpO<sub>2</sub> Reusable Sensor, SpO<sub>2</sub> Adapter Cable, Reusable Oral Temp Probe, 5 Box of 20 probe covers)
- 99-0130-15 SunTech CT50, BP, Nellcor Comp. SpO<sub>2</sub>, Temp, Printer (includes Nellcor-compatible Adult SpO<sub>2</sub> Reusable Sensor, SpO<sub>2</sub> Adapter Cable, Reusable Oral Temp Probe, 5 Box of 20 probe covers), 1 roll thermal paper)

\*All systems include 10'/3m BP Patient Hose, Battery, Quick Start Guide, Adult Plus OPD Cuff, Large Adult Plus OPD Cuff

### Masimo SET SpO<sub>2</sub> Accessories

- Masimo M-LNC-10 SpO<sub>2</sub> Patient Cable 10'/3.0m, 2525 Contact Masimo for price and availability
- Masimo M-LNCS DCI Adult SpO<sub>2</sub> Reusable Sensor, 2501 Contact Masimo for price and availability

### Standard SpO<sub>2</sub> Accessories (Nellcor-Compatible)

- 52-0014-00 CT50 Reusable SpO<sub>2</sub> Pediatric Finger Sensor
- 52-0014-01 CT50 Reusable SpO<sub>2</sub> Neonatal Finger Sensor



- 52-0014-02 CT50 SpO2 Extension Cable
- 52-0014-03 CT50 Reusable Adult SpO2 Finger Sensor

### **Covidien Filac 3000 Temperature Accessories**

- 52-0009-00 F3000 Oral/Axillary Temp Probe, 9'
- 52-0009-01 F3000 Rectal Temp Probe, 9'

### **Blood Pressure Cuffs (Each)**

- 98-0599-41 OPD Child (12-19cm) BP Cuff, Bayonet
- 98-0599-43 OPD Small Adult (17-25cm) BP Cuff, Bayonet
- 98-0599-45 OPD Adult (23-33cm) BP Cuff, Bayonet
- 98-0599-4A OPD Adult Plus (28-40cm) BP Cuff, Bayonet
- 98-0599-47 OPD Large Adult (31-40cm) BP Cuff, Bayonet
- 98-0599-4C OPD Large Adult Plus (40-55cm) BP Cuff, Bayonet

### **Blood Pressure Cuffs (Box of 5)**

- 98-0600-41 OPD Child (12-19cm) BP Cuff, Bayonet
- 98-0600-43 OPD Small Adult (17-25cm) BP Cuff, Bayonet
- 98-0600-45 OPD Adult (23-33cm) BP Cuff, Bayonet
- 98-0600-4A OPD Adult Plus (28-40cm) BP Cuff, Bayonet
- 98-0600-47 OPD Large Adult (31-40cm) BP Cuff, Bayonet
- 98-0600-4C OPD Large Adult Plus (40-55cm) BP Cuff, Bayonet

### **CT50 Accessories**

- 46-0040-00 Deluxe Mobile Stand
- 45-0005-00 CT40/50 WiFi Dual Band USB Dongle
- 91-0028-16 10'/3.0m Patient BP Hose, Bayonet to Bayonet
- 91-0003-00 AC Power Cord, Americas
- 91-0003-05 AC Power Cord, Europe
- 91-0003-06 AC Power Cord, UK
- 98-0900-02 CT50 Rechargeable Lithium Ion Battery
- 99-0184-00 CT50 Barcode Scanner
- 52-0029-00 Printer Paper