

GERMAN

Dear Custome

We are pleased that you have chosen a product from our range. Our name stands for high-quality and thoroughly tested quality products in the areas of heat, weight, blood pressure, body temperature, pulse, gentle therapy, massage, beauty, baby and air. Please read these instructions for use carefully, keep them for later use, make them accessible to other users and follow the instructions.

With kind regards Your Beurer team

1. Scope of delivery

1 lanyard 1 data cable 1 USB charge 1 belt pouch

1 This user manual

2. Intended use

Only use the Beurer PO 80 pulse oximeter on humans to measure arterial oxygen saturation (SpOÿ) of hemoglobin and heart rate (pulse rate). The pulse oximeter is suitable for use both in the private sphere (at home) and in the medical sector (hospitals, medical facilities)

3. To get to know each other

The Beurer PO 80 pulse oximeter is used for non-invasive measurement of arterial oxygen saturation (SpO2) and heart rate (pulse rate). The oxygen saturation indicates what percentage of the hemoglobin in the arterial blood is loaded with oxygen. It is therefore an important parameter for assessing respiratory function. If you fall below or exceed your individually set alarm limits, you will receive an acoustic warning. The integrated memory enables continuous recording of up to 24 hours. The pulse oximeter can be connected to a PC via the integrated USB port. The "SpO2

Assistant"-Software.

The pulse oximeter uses two light beams of different wavelengths to measure, which hit the finger inside the housing.

A low oxygen saturation value is mainly due to diseases (respiratory diseases, asthma, cardiac insufficiency, etc.). The following symptoms occur more frequently in people with low oxygen saturation values: shortness of breath, heart rate increase, loss of performance, nervousness and sweating. A chronic and known reduced oxygen saturation requires monitoring by your pulse oximeter under medical supervision. An acutely reduced oxygen saturation, with or without accompanying symptoms, must be clarified immediately by a doctor, it can be a life-threatening situation. The pulse oximeter is therefore particularly suitable for high-risk patients such as people with heart disease and asthmatics, but also for athletes and healthy people who move at high altitudes (e.g. mountaineers, skiers or sports pilots).

4. Explanation of symbols

The following	following symbols are used in the instructions for use, on the packaging and on the type plate of the device:				
\triangle	WARNING Warning of the risk of injury or danger to Your Health	-	Manufacturer		
\triangle	DANGER Safety notice regarding possible damage to the device/ Accesories	Ŕ	Applied part type BF		
(\mathbf{i})	a notice Note on important information	SN	serial number		
€∂	Follow the instructions	CE0483	CE marking This product meets the requirements of the applicable European and national directives.		
%SpOÿ	Arterial oxygen saturation of hemoglobin (in Percent)	IP22	Device protected against foreign objects ÿ12.5 mm and against sloping dripping water		
PR bpm pu	lse rate (beats per minute)	Storage/Tran	sport Permissible storage and transport temperature and humidity		
Ø	Disposal in accordance with waste electrical and electronic equipment EG-Richtlinie WEEE (Waste Electrical and Electronic Equipment)	Operating	Permissible operating temperature and humidity		

5. Warnings and Precautions

Read these instructions for use carefully! Failure to observe the following instructions can cause personal injury or damage to property. Keep the instructions for use and make them accessible to other users. Pass on these operating instructions if the device is passed on.

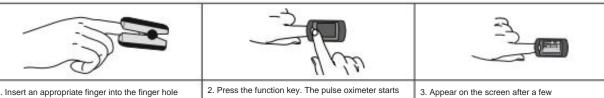
• Check that all parts specified in the scope of delivery are included. • Before use, make sure that the device and accessories do not show any visible damage. If in doubt, do not use it and contact your dealer or the specified customer service address Do not use any additional parts that are not recommended by the manufacturer or offered as accessories. • Under no circumstances may you open or repair the device, as otherwise it cannot be guaranteed that it will function properly. In case of non-compliance the guarantee expires. For repairs, contact Beurer customer service or an authorized dealer

Use the pulse oximeter

- ÿ NOT if you are allergic to rubber products.
- ÿ NOT if the device or the application finger is wet. ÿ NOT on small children or infants.
- ÿ NOT during an MRI or CT scan.
- ÿ NOT during a blood pressure measurement on the arm side with cuff application.
- ÿ NOT on fingers with nail polish, dirt or plaster bandages
- ÿ NOT on thick fingers that cannot be easily inserted into the device (fingertip: width approx. > 20 mm, thickness >15 mm). ÿ NOT on fingers with anatomical changes, edema, scars or burns.
- ÿ NOT on fingers that are too thin and too small, such as those found on small children (width approx. < 10 mm, thickness < 5 mm).
- ÿ NOT on patients who are restless at the application site (eg tremors).
- ÿ NOT in the vicinity of flammable or explosive gas mixtures

• Prolonged use of the pulse oximeter may cause discomfort or pain for people with circulatory disorders. Therefore, do not use the pulse oximeter on one finger for more than 2 hours. Do not carry out any it based on the me nt results without consulting your doctor. In particular, do not start a new r

8. Service CE 0483



seconds your readings

measuring. Do not move during the measurement of the pulse oximeter as shown. Keep your finger steady process

(i) a notice

If you pull your finger out of the pulse oximeter, the device switches off automatically after approx. 5 seconds.

8.1 Function Kev

The function button of the pulse oximeter has a total of two functions:

• Power on function: When the pulse oximeter is off, you can turn it on by pressing the function button.

• Settings menu function: To enter the settings menu, first hold the pulse oximeter so that the display screen is in landscape format. To enter the settings menu, press and hold the function button during operation. In the settings menu you can set the following parameters: display brightness, alarm settings, time and data recording.

(i) a notice

The orientation of the display (portrait, landscape) is done automatically. This allows you to read the values on the display at any time, no matter how you hold the pulse oximeter.

8.2 Display-Helligkeit ("Brightness")

• To adjust the display brightness, turn on the pulse oximeter and press and hold the function button. In the settings, select menu by briefly pressing the function key to select the "System" menu item. You confirm your selection by pressing and holding the function key. In the "Svstem" menu item, select "Brightness" again. You can switch between different brightness levels by long pressing the function button

• To exit the settings menu, use the function key to select the menu item "Exit" and confirm by pressing and holding the function key.

8.3 Alarm Settings ("Alarm")

• Turn on the pulse oximeter and press and hold the function button. The settings menu appears on the display. • In the settings menu, use the function button to select the menu item "Sound" and confirm by pressing and holding the function button. • Use the function key to select your desired parameter and set your desired value by pressing and holding the function key

In the alarm menu you can set the following parameters:

"Direction"	Here you can set whether the setting value runs up ("up") or down ("down") when setting the alarm limits in the alarm menu. Changing the setting direction is necessary if limit values are to be increased ("up") or decreased ("down").
"SPO2 ALM HI"	Here you can set an upper limit for the oxygen saturation. If a measurement exceeds the set limit, the saturation value will turn yellow and a beep will sound (if alarm is enabled).
"SPO2 ALM LO"	Here you can set a lower limit for the oxygen saturation. If a measurement falls below the set limit, the saturation value appears in yellow and a beep sounds (if alarm is activated).
PR ALM HI"	Here you can set an upper limit for the heart rate. If a measurement exceeds the set limit, the pulse rate will appear in yellow and a beep will sound (if alarm is enabled).
PR ALM LO"	Here you can set a lower limit for the heart rate. If a measurement falls below the set limit, the pulse rate appears in yellow and a beep sounds (if alarm is activated).
"Alarm"	Here you can activate ("on") or deactivate ("off") the alarm. If you have activated the alarm and one of the set upper or lower limit values is exceeded or not reached, a signal tone sounds.
"Pulse Sound"	Here you can activate ("on") or deactivate ("off") the pulse tone. If you have activated the pulse tone, a signal tone sounds during the measurement with each pulse beat.

• To exit the alarm menu, use the function key to select the menu item "Exit" and confirm by pressing and holding the function

8.4 Set time

You have two options to set the time Option 1: Synchronize device time via connection with PC software After you have connected the device to the "SpO2 Assistant" software according to the "PC Software" chapter, select "Options" and "Synchronize Device Time" in the PC software to synchronize the device time.

Option 2: Set device time manually

From the main menu, press the function button until "Clock" is selected, then hold to enter the sub-menu. Press the function button until the desired option is selected, then hold to change the value. "Set Time": set the time, "yes": allow, "no": prohibit "Set Year": Set the year Set Month": Set month "Set Day": Set day "Set Hour": Set the hour "Set Minute": Set the minute After setting, press the function button until "Exit" is selected, then hold to exit the time setting and return to the main menu.

8.5 System Settings

From the main menu, press the function button until System is selected, then hold to enter the system menu. Press the function button until the desired option is selected, then hold to change the value "Hard.Ver.": Hardware-Version "Soft.Ver.": Software-Version "ID": username "Demo": set demo mode; "on": activate demo mode, "off": deactivate demo mode "Sound Volume": Set the volume in the range 1-3 Once set, press the function button until "Exit" is selected, then hold to exit the system menu and return to the main menu.

8.6 Recording measurement data ("Record")

With the pulse oximeter PO 80 you can record your measurement data over a period of up to 24 hours. If you wish, you can save the recorded measurement data on the computer or print it out as a report. In the main menu, press the function button until "Record" is selected, then hold it down to enter the "Record Menu". When measuring, if the red dot "Re" flashes, it means that the device records

Press the function button until the desired option is selected, then hold to change the value. "Mode": Selection of the recording mode from "Auto" (automatic) and "Manual" (manual) In manual mode, recording can be (de)activated using "Record".

13. What to do in case of problems?

Problem	Possible Cause	fix	
The pulse oximeter shows no readings	The battery of the pulse oximeter is empty	Charge the battery via the USB port	
	Insufficient blood flow to the measuring finger Observ	e the warnings and safety instructions in Chapter 5	
Pulse oximeter shows measurement interruptions or high jumps in measured values	Measuring finger is too big or too small	Fingertip must have the following dimensions: Width between 10 - 22 mm Thickness between 5-15mm	
	Finger, hand or body is inside Movement	Keep your fingers, hand and body still during the measurement	
	cardiac arrhythmias	Consult a doctor	

14. Specifications

Model no.	AFTER 80	
measurement method	Non-invasive fingertip measurement of arterial hemoglobin oxygen saturation and pulse rate	
measuring range SpOÿ 0 - 100%, Pulse 30-250 beats/minute		
accuracy	SpOÿ 70 –100%, ±2%, Pulse 30 - 250 bpm, ±2 beats/minute	
Dimensions	L 57 mm x B 32 mm x H 30 mm	
Weight	Approx.	
Sensor technology for measuring SpOÿ	ing SpOÿ 42 g red light (wavelength 660 nm); infrared (wavelength 905 nm); Silicon receiver diode	
Permissible operating conditions	+10°C to +40°C, ÿ 75% relative humidity, 700–1060 hPa ambient pressure	
Permitted Storage Conditions	-40°C to +60°C, ÿ 95% relative humidity, 500–1060 hPa ambient pressure	
power supply Built-in rechargeable lithium battery 500mAh / 3.7V		
classification	IP22, type BF applied part	
System requirements for software	Supported operating systems: from Windows 8.1	

The serial number can be found on the device or in the battery compartment.

Specifications are subject to change without notice for update reasons.

• This device conforms to European standards EN 60601-1 and EN 60601-1-2 (compliance with CISPR 11, CISPR 22, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11) and is subject to special precautions regarding electromagnetic compatibility . Please note that portable and mobile HF communications equipment can affect this device. You can request more detailed information from the customer service address provided.

• The device meets the requirements of the European Medical Devices Directive 93/42/EEC, the Medical Devices Act. According to the "Operator Regulations for Medical Devices". regular metrological checks must be carried out if the device is used for commercial or economic purposes. Even for private use, we recommend that you have a metrological check at the manufacturer's every 2 years.

Notes on Electromagnetic Compatibility

Vicinity

• The device is suitable for use in all environments specified in this user manual, including domestic ones

• The device may have limited usability in the presence of electromagnetic disturbances. As a result, error messages or a failure of the display/device may occur.

• The use of this device adjacent to other devices or stacked with other devices should be avoided as it may result in improper operation. If use of the prescribed type is nevertheless necessary, this device and the other devices should be observed to ensure that they are working properly.

 The use of accessories other than those specified or provided by the manufacturer of this device can result in increased electromagnetic interference emissions or reduced electromagnetic interference immunity of the device and lead to incorrect operation

• Keep portable RF communications equipment (including peripherals such as antenna cables or external antennas) at least 30cm away from any part of the equipment, including any cables provided. Non-observance can lead to a reduction in the performance characteristics of the device

Non-observance can lead to a reduction in the performance characteristics of the device

15. Warranty/Service

Beurer GmbH, Söflinger Straße 218, D-89077 Ulm (hereinafter referred to as "Beurer") grants a guarantee for this product under the following conditions and to the extent described below

The following warranty conditions do not affect the statutory warranty obligations of the seller from the purchase contract with the buyer

The guarantee also applies without prejudice to mandatory statutory liability regulations.

Beurer guarantees the flawless functionality and completeness of this product.

The worldwide guarantee period is 5 years from the start of the purchase of the new, unused product by the buyer

This guarantee only applies to products that the buyer has purchased as a consumer and uses exclusively for personal purposes within the framework of domestic use

German law applies.

If this product proves to be incomplete or defective in terms of functionality during the guarantee period in accordance with the following provisions, Beurer will carry out a replacement delivery or repair free of charge in accordance with these guarantee conditions

If the buyer would like to report a warranty claim, they should first contact Beurer Customer Service: Beurer GmbH, Service Center Tel: +49 731 3989-144

For speedy processing, please use our contact form on the website www.beurer.com under the heading 'Service'.

The buyer then receives more detailed information on how to process the guarantee case, eg where to send the product free of charge and which documents are required

A claim under the guarantee can only be considered if the buyer can present - a copy of the invoice/purchase receipt and - the original product to Beurer or an authorized Beurer partner.

Specifically excluded from this warranty are - wear and tear resulting from normal use or consumption of the product; - accessories supplied with this product that wear out or are used up with proper use (e.g. batteries, rechargeable batteries, cuffs, seals, electrodes, lamps, attachments, inhaler accessories); - Products that have been used, cleaned, stored or serviced improperly and/or contrary to the provisions of the operating instructions, as well as products that have been opened, repaired or modified by the buyer or a service center not authorized by Beurer; - Damage occurring on the transport route between the manufacturer and the customer or between the service center and the customer

Products purchased as 2nd choice or used items;

s product (in this case, however, there may be claims from product liability or other may

your own and do not make any changes to the type and/or dosage of an existing medication

• Do not look directly into the inside of the housing during the measurement process. The red light and the invisible infrared light of the pulse oximeter are harmful to the eyes

• This device is not intended to be used by people (including children) with restricted physical, sensory or mental abilities or lack of experience and/or knowledge, unless they are supervised by a person responsible for their safety or received instructions from her on how to use the device. Children should be supervised to ensure they do not play with the device.

• The display of the pulse wave and the pulse column do not allow any assessment of the pulse or blood flow strength at the measurement location, but only serve to display the current optical signal variation at the measurement location, but they do not enable reliable pulse diagnostics.

Failure to follow the instructions below may result in inaccurate or erroneous measurements.

• There should be no nail polish, artificial nails or other cosmetics on the measuring finger. • When using the measuring finger, ensure that the fingernail is short enough for the fingertip to cover the sensor elements in the housing.

• Keep your hand, fingers and body still during the measurement process.

• In the case of people with cardiac arrhythmias, the measured SpOÿ and heart rate values may be incorrect or the measurement may not be correct at all only possible.

• Pulse oximeter readings are too high in case of carbon monoxide poisoning.

• In order not to falsify the measurement result, there should be no strong light sources in the immediate vicinity of the pulse oximeter (e.g fabric lamp or direct sunlight).

· People who have low blood pressure, suffer from jaundice, or are taking medication to cause vasoconstriction may experience erroneous or falsified measurements

Display description

• In patients who have received clinical dyes in the past and in patients with abnormal hemoglobin levels

a false measurement is to be expected. This applies in particular to carbon monoxide poisoning and methaemoglobin poisoning, which are caused, for example, by the administration of local anesthetics or when there is a methaemoglobin reductase deficiency. · Protect the pulse oximeter from dust, shock, moisture, extreme temperatures and explosive substances

Notes on handling rechargeable batteries

• If liquid from a battery cell contacts your skin or eyes, wash the affected area with water and get medical attention

• 🛆 Danger of swallowing! Small children could swallow batteries and choke on them. Therefore, keep batteries out of the reach of small children! • Pay attention to the plus (+) and minus (-) polarity markings. • If a battery leaks, put on protective gloves and clean the battery compartment with a dry cloth.

Protect batteries from excessive heat.

Danger of explosion! Do not throw batteries into fire.

· Do not disassemble, open or shred batteries

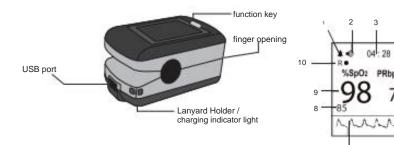
Use only the chargers specified in the instructions for use.

• Batteries must be properly charged before use. The manufacturer's instructions and the information in these instructions for use for the correct loads must always be observed

• Fully charge the battery before using it for the first time.

• In order to achieve the longest possible battery life, fully charge the battery at least twice a year.

6. Device Description



1. Alarm icon . Pulse tone icon (crossed out = (crossed out = alarm disabled) pulse tone disabled 3. Time 4. Akku-Anzeige 5. Pulses 6. Pulse rate 75 (value in bpm) . Pulswelle SpOÿ alarm (low limit) 9. Oxygen sat 10. Record

tion (value in %)

7. Commissioning 7.1

Charging the pulse oximeter

If the battery indicator on the display shows a low battery level, you need to charge the pulse oximeter. You can charge the pulse oximeter in two different ways.

Variant 1: Connect the supplied data cable to the USB port of the pulse oximeter. Plug the other (large) end of the data cable into the included charger. Plug the charger into the outlet

Variant 2: Connect the supplied data cable to the USB port of the pulse oximeter. Plug the other (large) end of the data cable into your computer's USB port.

(I) a notice

During the charging process, the blue charging indicator light on the pulse oximeter lights up. As soon as the battery is fully charged, the blue charging indicator light goes out.

7.2 Install the "SpOÿ Assistant" software

You can transfer the measurement data from the pulse oximeter to your computer using the "SpO2 Assistant" software. With the "SpO2 Assistant" you can have your values displayed on the computer screen in real time during the measurement and transfer and manage the previously saved measurement data to the computer.

To install the software, perform the following steps: • Download the free "SpO2 Assistant" from our website (www.beurer.com) under Service > Download Center > Software

• Start the installation file "SpO2Setup.exe" . Follow the instructions during the installation process.

7.3 Fasten the neck strap

You can attach a lanyard to the device to make it easier to carry the pulse oximeter.



1. Slide the narrow end of the lanyard through the holder as shown.

2. Tighten the other end of the lanyard through the loop of the narrow end.

Automatic recording starts as soon as stable data is acquired and ends when the finger is pulled out (maximum 99 data groups). The maximum recording time is

72 hours. In manual recording, up to 24 hours can be recorded.

If the memory is full, "Memory is full!" will be displayed and the device will go into standby mode after a few seconds. After the next exit from the standby mode, Memory is full!" is displayed to alert the user that the memory is full. Press the function button again to go to the measurement screen.

(i) a notice

When you start a new recording, the previous recording is automatically and irrevocably overwritten. The maximum recording time is 24 hours.

8.7 PC Software ("SpO2 Assistant")

With the PC software "SpO2 Assistant" you can transfer your stored data as well as display and record a current measurement

To do this, connect the pulse oximeter to your PC using the supplied USB data cable. Start the program on your PC. You can download the "SpO2 Assistant" PC software from connect.beurer.com/download. The corresponding system requirements can be found at: https://www.beurer.com/web/de/im-fokus/connect/systembedingungen.php Further application details for the software can be found in the software under the "Instructions" tab.

9. Assess measurement results

NOT apply to people with ce cardiac insufficiency, respire	ssing your measurement results does ertain pre-existing conditions (e.g. asthma, atory diseases) and those staying at If you have any pre-existing conditions, o evaluate your readings.	Altitude dependent drop in oxygen saturation a notice The table below informs you about the effects of different altitudes on the oxygen saturation value and their consequences for the human organism. The table below does NOT apply to people with certain pre-existing conditions (e.g. asthma, cardiac insufficiency, respiratory diseases, etc.). Symptoms (e.g. hypoxia) can already occur at lower altitudes in persons with pre-existing conditions.		
Measurement result SpOÿ (oxygen saturation) in %	classification / Actions to take	altitude	to be expected SpOÿ value (oxygen saturation) in %	consequences for humans
99-94	normal range	1500-2500 m	> 90	No altitude sickness (in the Rule)
94-90	Degraded area: Doctor visit recommended	2500-3500 m	~90	Altitude sickness, adaptation recommended
< 90 Critical area: Consult a doctor urgently		3500-5800 m	<90	Very frequent occurrence of a Altitude sickness, adaptation mandatory
and invasive ventilation as	sch W et al. S2k guideline: Non-invasive s therapy for chronic respiratory	5800-7500 m	<80	Severe hypoxia, only temporary stay possible
insufficiency Revision 2017; Pneumology 2017; 71: 722795"		7500-8850 m	<70	Immediate acute danger to life

Quelle: Hackett PH. Roach RC: High-Altitude Medicine. In: Auerbach PS (ed): Wilderness Medicine, 3rd edition; Mosby, St.Louis, MO 1995; 1-37.

10. Cleaning / Maintenance

CAUTION:

Do not use high-pressure sterilization on the pulse oximeter!

Never hold the pulse oximeter under water, otherwise liquid can penetrate and damage the pulse oximeter

• After each use, clean the housing and the rubberized inner surface of the pulse oximeter with a soft, medical-grade alcohol get a damp cloth.

11. Retention

A DANGER:

Store the pulse oximeter in a dry environment (relative humidity ÿ 95%). Excessive humidity can shorten the life of the pulse oximeter or damage it. Store the pulse oximeter in a place where the ambient temperature is between -40°C and 60°C.

12. Disposal

General disposal In the

interest of environmental protection, the device must not be disposed of with household waste at the end of its service life. Disposal can take place at appropriate collection points in your country. Dispose of the device in accordance with the EC directive for waste electrical and electronic equipment - WEEE (Waste Electrical and Electronic Equipment). If you have any questions, please contact the local authority responsible for disposal,

battery disposal

 You must take the used, completely discharged batteries to specially marked collection containers, hazardous waste collection points or dispose of via the electronics retailer. You are legally obliged to dispose of the batteries. · You will find these symbols on batteries containing harmful substances Pb = battery contains lead,

Cd = battery contains cadmium, Hg = battery contains mercury.

provisions).

R

R

Pb Cd Hg

Repairs or a complete replacement do not extend the warranty period under any circumstances.



www.beurer.com • www.beurer-healthquide.co

ENGLISH

Dear customer

Thank you for choosing one of our products. Our name stands for high-quality, thoroughly tested products for applications in the areas of heat, weight, blood pressure, body temperature, pulse, gentle therapy, massage, beauty, baby and air. Please read these instructions for use carefully and keep them for later use, be sure to make them accessible to other users and observe the information they contain.

With kind regards, Your Beurer team

1. Included in delivery

1 PO 80 pulse oximete 1 Lanyard 1 Data cable 1 USB charge 1 Belt bag 1 These instructions for use

2. Intended use

Only use the Beurer PO 80 pulse oximeter on humans to measure the arterial oxygen saturation (SpOÿ) of haemoglobin and the heart rate (pulse rate). The pulse oximeter is suitable for private use (at home) as well as for use in the medical sector (hospitals, medical establishments).

3. Getting to know your device

The Beurer PO 80 pulse oximeter provides a non-invasive measurement of the arterial oxygen saturation (SpO2) and the heart rate (pulse rate). Oxygen saturation indicates the percentage of haemoglobin in arterial blood that is loaded with oxygen. Therefore it is an important parameter for assessing the respiratory function. If the values fall below or exceed your individually set alarm limits, you receive an acoustic warning. Thanks to the integrated memory, it is possible to record data continuously for up to 24 hours. The pulse oximeter can be connected to a PC using the integrated USB connection.

The "SpO2 Assistant" software enables you to carry out a detailed evaluation of your records.

To take a measurement, the pulse oximeter uses two rays of light with differing wavelengths, which strike the finger inserted inside the housing.

A low oxygen saturation value generally indicates underlying illnesses (respiratory diseases, asthma, heart failure etc.). People with a low oxygen saturation value are more likely to experience the following symptoms: shortness of breath, increased heart rate, weakness, nervousness and outbreaks of sweating. If oxygen saturation is known to be chronically diminished, it requires monitoring using the pulse oximeter under medical supervision. If you have acutely diminished oxygen saturation, with or without the accompanying symptoms, you must consult a doctor immediately as it could lead to a life threatening situation. The pulse oximeter is particularly suitable for patients at risk such as people with heart disease or asthma, but also for athletes and healthy people who exercise at high altitude (e.g. mountaineers, skiers or amateur pilots).

4. Signs and symbols

\triangle	WARNING Warning instruction indicating a risk of injury or dam age to health		Manufacturer
\triangle	IMPORTANT Safety note regarding potential for damage to the device/ accessories	Ŕ	Application part, type BF
1	Note Note on important information	SN	Serial number
63	Observe the instructions for use	C € 0483	CE labelling This product satisfies the requirements of the applicable European and national directives.
% SpOÿ Arte	rial oxygen saturation of haemoglobin (in percent)	IP22	Device protected against foreign objects y 12.5 mm and against falling drops of water
PR bpm Pul	se rate (beats per minute)	Storage/Trans	port Permissible storage and transport temperature and humidity
X	Disposal in accordance with EC Directive WEEE (Waste Electrical and Electronic Equipment)	Operating	Permissible operating temperature and humidity

5. Warnings and safety notes

Read these instructions for use carefully. Non-observance of the following information may result in personal injury or material damage. Store these instructions for use and make them accessible to other users. Make sure you include these instructions for use when handing over the device to third parties.

. Check to ensure that the package contains all the parts that should be included in the delivery. . Before use, ensure that there is no visible damage to the unit or accessories. When in doubt, do not use the unit and contact your dealer or the cus tomer service address provided.

• Do not use any additional parts that are not recommended by the manufacturer or offered as equipment.

• Under no circumstances should you open or repair the device yourself, as faultless functionality could no longer be guaranteed thereafter. Failure to comply will result in voiding of the warranty. For repairs, please contact Beurer customer services or an authorised retaile

- Do NOT use the pulse oximete
- ÿ if you are allergic to rubber products
- ÿ if the device or the finger you are using is damp. ÿ on small children or babies

ÿ during an MRI or CT scan

v whilst taking a blood pressure measurement on the same arm using a cuff.

- y on fingers that have nail varnish on, are dirty or have a plaster or other dressing on them.
- v on large fingers that do not fit into the device easily (fingertip: width approx. > 20 mm, thickness >15 mm). ÿ on fingers with anatomical changes, oedemas, scars or burns.

ÿ on fingers that are too small, as with small children for example (width approx. < 10 mm, thickness < 5 mm).

ÿ on patients who are not steady at the site of application (e.g. trembling).

ÿ near flammable or explosive gas mixtures.

• Using the device for long periods may cause discomfort or pain for people with circulatory disorders. Therefore do not use the pulse oximeter for longer than 2 hours on one finger

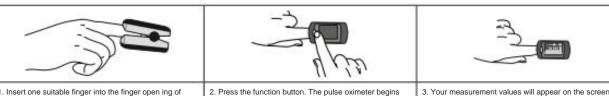
• Do not self-diagnose or self-medicate on the basis of the measurements without consulting your doctor. In particular, do not start taking any new medi cation or change the type and/or dosage of any existing medication without prior approval.

• Do not look directly inside the housing during the measurement. The red light and the invisible infra-red light in the pulse oximeter are harmful to your

• This device is not intended for use by people (including children) with restricted physical, sensory or mental skills or a lack of experience and/or a lack of knowledge, unless they are supervised by a person who has responsibility for their safety or they receive instructions from this person on how to use the device. Children should be supervised around the device

8. Operation

CE0483



after a few second the pulse oximeter as shown and hold it steady. its measurement. Do not move during the measurem

(i)_{Note}

When you remove your finger from the pulse oximeter, the device will automatically switch off after approx. five seconds

8.1 Function button

The function button on the pulse oximeter has two functions in total:

• Switch-on function: When the pulse oximeter is switched off you can hold down the function button to switch it on.

• Settings menu function: To access the settings menu, first hold the pulse oximeter so that the display appears in horizontal format. To call up the set tings menu, press and hold down the function button during operation. You can set the following parameters in the settings menu: display brightness, alarm settings, time, and data recording.

(I) Note

The display orients automatically (vertical format, horizontal format). This ensures that the values are easy to read on the display at all times, regardless of how you hold the pulse oximeter

8.2 Display brightness

- To set the display brightness, switch on the pulse oximeter and press and hold down the function button. In the settings menu, the menu item "Bright ness" is deactivated. Press and hold down the function button to confirm your selection. In the menu item "System", select "Brightness" again. You can switch between the various
- brightness levels by pressing and holding down the function button • To exit the settings menu, use the function button to select the "Exit" menu item and confirm by pressing and holding down the function button.

8.3 Alarm settings

• Switch on the pulse oximeter and press and hold down the function button. The settings menu appears on the display. • In the settings menu, use the function button to select the "Sound" menu item and confirm by pressing and holding down the function button.

• Use the function button to select the desired parameter and set the desired value by pressing and holding down the function button.

You can set the following parameters in the alarm menu

"Direction"	Here you can set whether the setting value runs up or down when setting the alarm limits in the alarm menu. It is necessary to change the setting direction if you would like to move the limits up or down.
"SPO2 ALM HI"	Here you can set an upper limit for oxygen saturation. If, during a measurement, the set limit is exceeded, the saturation value appears yellow and a signal sounds (if the alarm is activated).
"SPO2 ALM LO"	Here you can set a lower limit for oxygen saturation. If, during a measurement, the set limit is undercut, the saturation value appears yellow and a signal sounds (if the alarm is activated).
"PR ALM HI"	Here you can set an upper limit for the pulse rate. If, during a measurement, the set limit is exceeded, the pulse rate appears yellow and a signal sounds (if the alarm is activated).
"PR ALM LO"	Here you can set a lower limit for the pulse rate. If, during a measurement, the set limit is undercut, the pulse rate appears yellow and a signal sounds (if the alarm is activated).
"Alarm"	Here you can activate ("on") or deactivate ("off") the alarm. If you have activated the alarm and the set upper or lower limit is exceeded or undercut, a signal sounds.
"Pulse Sound"	Here you can activate ("on") or deactivate ("off") the pulse tone. If you have activated the pulse tone, a signal sounds at every beat during the measurement.

• To exit the alarm menu, use the function button to select the "Exit" menu item and confirm by pressing and holding down the function button.

8.4 Setting the time

There are two ways to set the time Option 1: Connect to PC Software to synchronize device time

After connecting device to "SpO2 Assistant" software accoding to Chapter "PC Software" select "Options"."Synchronize Device Time" on PC software interface to synchronize the device time.

Option 2: Set device time manually

Under main menu, short press the button to select "Clock", long press the button to enter its sub-menu. Short press the button to select the option to be adjusted, then long press the button to change the value. "Set Time": set the time, "yes": allow, "no": prohibi "Set Year": set the year "Set Month": set the month "Set Day": set the day Set Hour": set the hou "Set Minute": set the minute After setting, short press the button to select "Exit", then long press the button to exit time setting interface and return to main menu.

8.5 System settings

In the main menu, press the function button until system is selected, then press and hold it to access the system menu. Short press the button to select the option to be adjusted, then long press the button to change the value. "Hard.Ver.": hardware versior "Soft.Ver.": software version "ID": user name "Demo": set the Demo mode, "on": turn on the Demo mode, "off": turn off the Demo mode. "Sound Volume": set the sound volume, adjustable range: 1 ~ 3 After setting, short press the button to select "Exit", then long press the button to exit the system menu and return to main menu.

8.6 Recording measurement data

With the pulse oximeter PO 80, you can record your measurement data over a period of up to 24 hours. If required, the measurement data can be stored on your computer or printed out as a report. Under the main menu, short press the button to select "Record", then long press the button to enter the "Record Menu" interface. It indicates that the device is storing when the red dot "R•" in measurement interface flickers. Short press the button to select the option to be adjusted, then long press the button to change the value "Mode": record mode selection, including: "Auto" and "Manual" mode. Under "Manual" mode, select to turn on / off memory by "Record". Auto record: start recording after stable data appear, pull out the finger to finish recording a group of data (99 group of data at most), the total duration does not exceed 72 hours. Manual record: store up to 24-hour data.

When the memory is full, it will display "Memory is full!", then it will enter the standby mode after several seconds. When exiting the standby mode next time, it will display "Memory is full!" to prompt user that the memory has been full, press the button again to enter the measurement interface

14. Technical Data

Model no. After 80				
Measurement method	Non-invasive measurement of arterial oxygen saturation of haemoglobin and pulse rate in finger	arterial oxygen saturation of haemoglobin and pulse rate in finger		
Measurement range	SpOÿ 0 – 100%, Pulse 30 – 250 beats/minute			
Accuracy	SpOÿ 70 –100%, ±2%,			
	Pulse 30 – 250 bpm, ±2 beats/minute			
Dimensions	L 57 mm x W 32 mm x H 30 mm			
Weight	Approx. 42 g			
Sensor to measure SpOÿ	Red light (wave length 660 nm); infra-red (wave length 905 nm); silicon receiver diode			
Permissible operating conditions	+10°C to +40°C, ÿ 75% relative humidity, 700–1060 hPa ambient pressure			
Permissible storage conditions	-40°C to +60°C, ÿ 95% relative humidity, 500–1060 hPa ambient pressure			
Power supply	Integrated, rechargeable lithium battery, 500ÿmAh / 3.7 V			
Classification	IP22, application part, type BF			
System requirements for software	Supported operating systems: from Windows 8.1			

The serial number is located on the device or in the battery compartment.

Technical information is subject to change without notification to allow for updates

• This device conforms with the European standards EN 60601-1 and EN 60601-1-2 (in accordance with CISPR 11, CISPR 22, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8 and IEC 61000-4-11) and is subject to particular precautions with regard to electro compatibility. Please note that portable and mobile HF communication systems may interfere with this device. For more details, please contact our Customer Services at the address indicated.

• The device meets the requirements of the European Medical Products Directive 93/42/EEC and the German Medical Products Act. In accordance with the Operators' Ordinance on Medical Products, regular measurement precision controls must be carried out if the device is used for commercial or economic purposes. Even in the case of private use, we recommend checking measurement precision at two-yearly intervals at the manufacturers.

Notes on electromagnetic compatibility

The device is suitable for use in all environments listed in these instructions for use, including domestic environments

• The use of the device may be limited in the presence of electromagnetic disturbances. This could result in issues such as error messages or the failure of the display/device.

- Avoid using this device directly next to other devices or stacked on top of other devices, as this could lead to faulty operation. If, however, it is neces sary to use the device in the
- manner stated, this device as well as the other devices must be monitored to ensure they are working properly • The use of accessories other than those specified or provided by the manufacturer of this device can lead to an increase in electromagnetic emissions
- or a decrease in the device's electromagnetic immunity; this can result in faulty operation. . Keep portable RF communication devices (including peripheral equipment, such as antenna cables or external antennas) at least 30 cm away from all
- device parts, including all cables included in delivery. Failure to comply with the above can impair the performance of the device.
- · Failure to comply with the above can impair the performance of the device

15. Warranty/service

Beurer GmbH, Söflinger Straße 218, 89077 Ulm, Germany (hereinafter referred to as "Beurer") provides a warranty for this product, subject to the require ments below and to the extent described as follows

The warranty conditions below shall not affect the seller's statutory warranty obligations which ensue from the sales agreement with the buyer.

The warranty shall apply without prejudice to any mandatory statutory provisions on liability

Beurer guarantees the perfect functionality and completeness of this product.

The worldwide warranty period is 5 years, commencing from the purchase of the new, unused product from the seller

The warranty only applies to products purchased by the buyer as a consumer and used exclusively for personal purposes in the context of domestic use. German law shall apply.

During the warranty period, should this product prove to be incomplete or defective in functionality in accordance with the following provisions, Beurer shall carry out a repair or a ment delivery free of charge, in accordance with these warranty conditions

If the buyer wishes to make a warranty claim, they should approach their local retailer in the first instance: see the attached "International Service" list of service addresses

The buyer will then receive further information about the processing of the warranty claim, e.g. where they can send the product and what documentation is required

A warranty claim shall only be considered if the buyer can provide Beurer, or an authorised Beurer partner, with - a copy of the invoice/ purchase receipt, and - the original product.

The following are explicitly excluded from this warranty: deterioration due to normal use or consumption of the product - accessories supplied with this product which are worn out or used up through proper use (e.g. batteries, rechargeable batteries, cuffs, seals, electrodes, light sources, attachments and nebuliser accessories); - products that are used, cleaned, stored or maintained improperly and/or contrary to the provisions of the instructions for use, as well as products that have been opened, repaired or modified by the buyer or by a service centre not authorised by Beurer; damage that arises during transport between manufacturer and customer, or between service centre and custome - products purchased as seconds or as used goods; consequential damage arising from a fault in this product (however, in this case, claims may exist arising from product liability or other compulsory statutory liability provisions).

Repairs or an exchange in full do not extend the warranty period under any circumstances.

to ensure they do not play with it.

• Neither of the displays for the pulse wave and pulse bar allows the strength of the pulse or circulation to be evaluated at the measurement site. Rather, they are exclusively used to display the current visual signal variation at the measurement site and do not enable reliable diagnostics for the pulse.

Non-observance of the following instructions can lead to inaccurate or incorrect measurement • There must not be any nail varnish, artificial nails or other cosmetics on the finger to be measured. • Ensure that the finger nail on the finger to be measured is short enough that the fingertip covers the sensor element in the housing. • Keep your hand, finger and body steady during the measurement. • For people with cardiac arrhythmia, the measurement values of SpOÿ and the heart rate may be incorrect or the measurement may not be possible at

• In cases of carbon monoxide poisoning, the pulse oximeter displays a measurement value that is too high. • To avoid falsifying the measuring result, there should not be any strong light sources (e.g. fluorescent lamps or direct sunlight) in the immediate vicinity of the pulse oximeter.

· People with low blood pressure, who suffer from jaundice or take medication for vascular contraction, may experience incorrect or falsified measure • Incorrect measurements are likely for patients who have been administered medical dye in the past or for those who have abnormal haemoglobin levels.

This applies in particular for cases of carbon monoxide poisoning and methaemoglobin poisoning, which can occur for example from the administration of local anaesthetics or from an existing methaemoglobin reductase deficiency. Protect the pulse oximeter from dust, shocks, moisture, extreme temperatures and explosive materials

Notes on handling rechargeable batteries

• If your skin or eyes come into contact with fluid from the battery cell, flush out the affected areas with water and seek medical assistance. • choking hazard! Small children may swallow and choke on rechargeable batteries. Store rechargeable batteries out of the reach of small

• Observe the plus (+) and minus (-) polarity signs. If a battery has leaked, put on protective gloves and clean the battery compartment with a dry cloth.
Protect batteries from excessive heat.

• Δ Risk of explosion! Never throw batteries into a fire.

• Do not disassemble, split or crush the rechargeable batteries

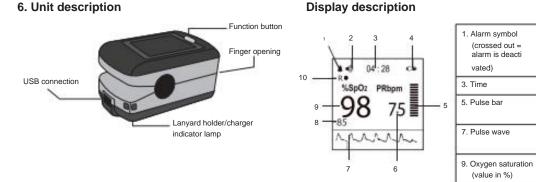
Only use chargers specified in the instructions for use.

• Batteries must be charged correctly prior to use. The instructions from the manufacturer and the specifications in these instructions for use regarding correct charging must be observed at all times.

• Fully charge the battery prior to initial use.

• In order to achieve as long a battery service life as possible, fully charge the battery at least twice per year.

Display description



7. Initial use

7.1 Charging the pulse oximeter If the battery indicator on the display shows a low battery charge state, the pulse oximeter must be charged. There are two ways to charge the pulse oximeter.

Option 1: connect the supplied data cable to the pulse oximeter's USB connection. Insert the other (large) end of the data cable into the supplied charger. Insert the charger into the socket.

Option 2: connect the supplied data cable to the pulse oximeter's USB connection. Insert the other (large) end of the data cable into your computer's USB port.

(I) Note

When the device is charging, the blue charger indicator lamp on the pulse oximeter lights up. The blue charger indicator lamp goes out as soon as the battery is fully charged.

7.2 Installing the "SpO2 Assistant" software

You can transfer the measurement data from the pulse oximeter to your computer using the "SpO2 Assistant" software. Using "SpO2 Assistant" you can display your values in real time on the computer screen during the recording. Moreover you can transfer previously stored measurement data to your computer and manage the data.

and tighten

To install the software, follow these steps:

• Download the free "SpO2 Assistant" software from our homepage (www.beurer.com) under Service > Download Center > Software. • Run the "SpO2Setup.exe" installation file. • Follow the instructions during the installation process.

7.3 Attaching the lanyard To transport the pulse oximeter more easily you can attach a lanyard to the device





1. Insert the narrow end of the lanvard through the holder as shown

. Draw the other end of the lanyard through the loop at the narrow end

(i) Note

If you start a new recording, the previous recording is automatically overwritten and cannot be recalled. The maximum recording duration is 24 hours

8.7 PC software ("SpO2 Assistant")

You can use the "SpO2 Assistant" software to not only transfer the data you have saved, but also display and record an ongoing measurement. To do so, connect the pulse oximeter to your PC using the supplied USB data cable. Start the program on your PC. You can download the "SpO2 Assistant" software from connect.beurer.com/download. The relevant system requirements are available at: https://www.beurer.com/web/gb/in-focus/connect/system-requirements.php Other details on using the software can be found in the software on the "Manual" tab.

9. Evaluating measurement results

WARNING The following table for evaluating your measurements does NOT apply to people with certain pre-existing conditions (e.g. asthma, heart failure, respiratory diseases) or whilst staying at altitudes above 1500 metres. If you have a pre-existing condition, always consult your doctor to evaluate your measurements.		Decline in oxygen saturation depending on altitude		
SpOÿ (oxygen satura tion) measurement in % Classification/ measures to be taken		Altitude	Expected SpOÿ value (oxygen satu ration) in %	Impact on human body
99-94	Normal range	1500-2500 m	> 90	No altitude sickness (normally)
94-90	Decreased range: visit to the doctor recommended	2500-3500 m	~90	Altitude sickness, acclimatisation recommended
< 90 Critical range: seek medical attention urgently		3500-5800 m	<90	Very frequent altitude sickness, acclimatisation absolutely es sential
Source: following "Windisch W et al. European consensus based (S2k) Guideline: Non-Invasive and Invasive Home Me chanical		5800-7500 m	<80	Severe hypoxia, only limited length of stay possible
Ventilation for Treatment of Chronic Respiratory Failure, Update 2017; Pneumologie 2017; 71: 722795"		7500-8850 m	<70	Immediate, acute danger to life

Source: Hackett PH, Roach RC: High-Altitude Medicine. In: Auerbach PS (ed): Wilderness Medicine, 3rd edition; Mosby, St.Louis, MO 1995; 1-37

10. Maintenance/cleaning

IMPORTANT:

2. Pulse tone symbol

4. Battery indicator

bpm)

limit)

10. Record

6. Pulse rate (value in

8. SpOÿ alarm (lower

(crossed out = pulse

tone is deactivated)

Do not use high-pressure sterilisation on the pulse oximeter! Under no circumstances should you hold the pulse oximeter under water, as this can cause liquid to enter and damage the pulse oximeter.

• Clean the housing and the interior rubber surface with a soft cloth dampened with medical alcohol after each use.

If you have any questions, please contact the local authorities responsible for waste disposal.

• The codes below are printed on rechargeable batteries containing harmful substances:

retailers. You are legally required to dispose of the rechargeable batteries.

11. Storage

INPORTANT:

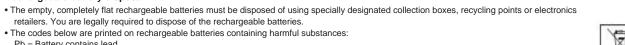
Store the pulse oximeter in a dry place (relative humidity \ddot{y} 95%). If the humidity is too high it may shorten the service life of the pulse oximeter or damage it. Store the pulse oximeter in a place where the ambient temperature is between -40 °C and 60 °C.

12. Disposal

General disposal

For environmental reasons, do not dispose of the device in the household waste at the end of its useful life. Dispose of the unit at a suitable local collection or recycling point. Dispose of the device in accordance with EC Directive - WEEE (Waste Electrical and Electronic Equipment).







13. What if there are problems?

Rechargeable battery disposal

Pb = Battery contains lead,

Cd = Battery contains cadmium,

Hg = Battery contains mercury.

Problem	Possible cause	Solution	
The pulse oximeter is not displaying measurement values	The pulse oximeter has run out of battery	Charge the battery via the USB connection	
	Insufficient circulation in the measurement finger Observe the	e warnings and safety notes in section 5	
The pulse oximeter is displaying measure ment interruptions or high measurement value jumps	Measurement finger is too large or too small	Fingertip must have the following measurements: Width between 10 and 22 mm Thickness between 5 and 15 mm	
	Finger, hand or body is moving	Keep your finger, hand and body still during the measurement	
	Cardiac arrhythmia	Seek medical attention	