Europe / Middle-East / Africa

Microlife WatchBP AG
Espenstrasse 139
9443 Widnau, Switzerland
Tel: + 41 71 727 7000
Fax: + 41 71 727 7011
watchbp@microlife.ch
www.watchbp.com
www.watchbp.nl

United Kingdom

Microlife Health Management Ltd. St. John's Innovation Centre Cowley Road Cambridge CB4 0WS United Kingdom

Tel: + 44 (0) 1223 422 444 Fax: + 44 (0) 1223 420 844 info@watchbp.co.uk service@watchbp.co.uk www.watchbp.co.uk

Asia

Microlife Corporation
9F, 431, RuiGang Road, NeiHu Taipei, 114,
Taiwan, R.O.C.
Tel: +886 2 8797 1288
Fax: +886 2 8797 1283
watchbp@microlife.com.tw
www.watchbp.com

WatchBP Microlife solutions B.V.

Mercator I Toernooiveld 220 6525 EC Nijmegen The Netherlands watchbp@microlife.ch www.watchbp.nl

United States / Canada / Latin America

Microlife USA Inc., 1617 Gulf to Bay Blvd, 2nd Floor Clearwater, FL 33755, USA Tel: +1-727-4425353 Fax: +1-727-4425331 msa@microlifeusa.com www.watchbp.com



For more information, please visit: www.watchbp.com

Microlife Corporation is a global corporation working closely with medical societies, specialists and primary care physicians to create tools and solutions that advance healthcare for the benefit of both physicians and patients.



Microlife WatchBP

Professional blood pressure monitors



Table of contents

Introduction	
WatchBP – The Cardiovascular Management Solution	1
Advantages of WatchBP	
Accuracy and Validations	3
Special Patient Validations	4
Early Detection and Prevention	6
Advanced Measurement Technology	8
WatchBP Features Overview	10
WatchBP Office	
WatchBP Office	14
WatchBP Office AFIB	16
WatchBP Office ABI	18
WatchBP Office Central	20
WatchBP 03	
WatchBP 03	24
WatchBP O3 Ambulatory	26
WatchBP Home	
WatchBP Home	30
WatchBP Home A	31
WatchBP Home A BT	32
WatchBP Home S	33
WatchBP Cuffs	
WatchBP Cuffs	34
Reference	
Reference	38



WatchBP

The professional cardiovascular management solution for better diagnosis of heart diseases and stroke risks

Clinical blood pressure measurement has limited accuracy because of:

- Blood pressure variability
- ✓ White coat effect / hypertension
- Masked hypertension

Therefore, guidelines recommend:

- Ambulatory (24-hour) blood pressure measurement
- Self-measurement of blood pressure at home
- ♥ Unattended automated office blood pressure measurement

Additional cardiovascular screening is also recommended for:

- Atrial Fibrillation (AF)
- Peripheral arterial disease
 - Ankle Brachial Index (ABI)
 - Inter-Arm Difference (IAD)
- ✓ For special patient groups, WatchBP devices are validated and recommended to measure:
 - Children from the age of 3 years
 - Pregnant women with or without pre-eclampsia
 - Patients with end stage renal disease
 - Diabetes patients
 - Very elderly
 - Patients with hypotension
 - Patients with atrial fibrillation

Microlife WatchBP presents a solution that makes screening for these important cardiovascular risks easy, fast and accurate.











Recommended by NICE

AFIB Detection (Microlife Technology)

Product overview

WatchBP Products

Office Blood Pressure Measurement



Ambulatory Blood Pressure Measurement



Self-Measurement of Blood Pressure at Home



Accuracy and validations

Clinically validated blood pressure monitors

All Microlife WatchBP devices are validated according to the established international protocols.

Clinical devices

WatchBP Device	Validation	Circumstance	
	BIHS	ESH / ISO-AAMI	Circumstance
Office (2nd generation)		Pass	At rest/ L-XL Size cuff /children >3 year
Office AFIB		Pass	At rest/ L-XL Size cuff /children >3 year
Office ABI	A/A	Pass	At rest/ L-XL Size cuff /children >3 year
Office Central	A/A	Pass	At rest/ L-XL Size cuff /children >3 year

^{*}All devices are validated for L-XL size cuff and for children from the age of 3 years old.

Ambulatory blood pressure monitoring devices

WatchBP	Validation	0:	
Device	BIHS	ESH / ISO-AAMI	Circumstance
O3 (2nd generation)		Pass	At rest/ L-XL Size cuff /children >3 year
O3 Ambulatory		Pass	At rest/ L-XL Size cuff /children >3 year
O3 AFIB		Pass	At rest/ L-XL Size cuff /children >3 year

Self-measurement devices

WatchBP	Validati	Validation protocol							
Device	вінѕ	ESH / ISO-AAMI	Circumstance						
	A/A	Pass	At Rest						
Home	A/A		Pregnancy						
	B/A		Pre-eclampsia						
			L-XL Size Cuff						
	A/A	Pass	At Rest						
Home A		Pass	L-XL Size Cuff						
Home A BT	A/A	Pass	At Rest						
(Bluetooth)		Pass	L-XL Size Cuff						
Home S		Pass	WatchBP Home Equivalence						

BIHS, British and Irish Hypertension Society; ESH, European Society of Hypertension; AAMI, Association for the Advancement of Medical Instrumentation; ISO, International Organization for Standardization.



Special patient validations

About special patient validations

Because of the technique that is used in automated oscillometric blood pressure monitors, they can be inaccurate when used in so-called special patient groups. This can lead to the fact that a blood pressure monitor that is validated in "regular subjects" may not give accurate readings when used e.g. during pregnancy or when used in children, elderly or diabetes patients. This can have serious clinical consequences.

Therefore, medical standard authorities require that a blood pressure monitor may only be recommended for such a special patient group if it has been validated for this specific group.

Microlife blood pressure monitors have passed many of these challenging validations so that they now may be recommended for almost all special patient groups.

	Stiff arteries						Very low E	3P values		AF	
	ESRD	Diabetes	Elderly	Dialysis	Pre-eclampsia	Pregnancy alone	Hypotension	Children & adolescents	Obesity	Cuff wide-range	
Microlife	•	•	•	•	•	•	•	•	•	•	•

^{*}ESRD, end-stage renal disease; AF, atrial fibrillation

Accurate measurement for End Stage Renal Disease

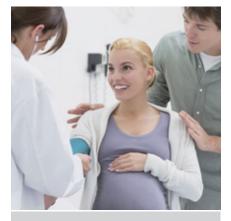
Microlife WatchBP is accurate for patients with end-stage renal disease.

Patients with moderate to severe renal disease have a very high incidence of hypertension, paired with stiff (calcified) arteries. As automated measurements can be influenced by stiff arteries, a special validation is required before blood pressure monitors can be recommended for use among patients with end stage renal disease.

Available models:

WatchBP Office WatchBP Office AFIB WatchBP Office ABI WatchBP Office Central WatchBP O3 WatchBP O3 Ambulatory WatchBP O3 AFIB WatchBP Home WatchBP Home A WatchBP Home A BT WatchBP Home S

Accurate measurement for Pre-eclampsia



What is Pre-eclampsia?

Pre-eclampsia is defined as new hypertension and substantial proteinuria after 20 weeks gestation. Due to the unpredictable nature of pre-eclampsia, hypertensive women must have their blood pressure measured frequently.

WatchBP is accurate for use in pregnancy and pre-eclampsia.

Available Models:

WatchBP Office
WatchBP Office AFIB
WatchBP Office ABI
WatchBP Office Central

WatchBP 03

WatchBP Home

Most oscillometric blood pressure monitors underestimate blood pressure in pre-eclampsia. For this reason, oscillometric blood pressure monitors may only be recommended for use in pregnancy when specifically tested in this special patient group. The WatchBP Home allows pregnant women to measure their blood pressure at home which could reduce the number of hospital visits and may help to make motherhood safer.

Accurate measurement for children



WatchBP devices are validated for blood pressure measurement in children from the age of 3 years old.

Available models:

WatchBP Office
WatchBP Office AFIB
WatchBP Office ABI
WatchBP Office Central

WatchBP O3 WatchBP O3 Ambulatory WatchBP O3 AFIB WatchBP Home Currently, blood pressure measurement is an important part of routine paediatric physical examination. However, as children have a high respiration rate and have difficulties in sitting still, one needs a blood pressure monitor with a high-quality algorithm that can filter out these artefacts. In addition, a wide cuff range is needed that covers very small to large arm circumferences. The WatchBP blood pressure monitor has proven to cover all these aspects and therefore can be recommended for children and adolescents aged 3 to 18 years old.

Accurate measurement for diabetes patients



WatchBP blood pressure monitors are validated for blood pressure measurement in patients with diabetes.

Patients with Diabetes Mellitus type 1 and 2 may have stiff arteries that can affect the blood pressure measurement. A recent validation study in diabetes patients type 1 and 2 showed that the WatchBP monitor is accurate when used in this patient group.

Available models:

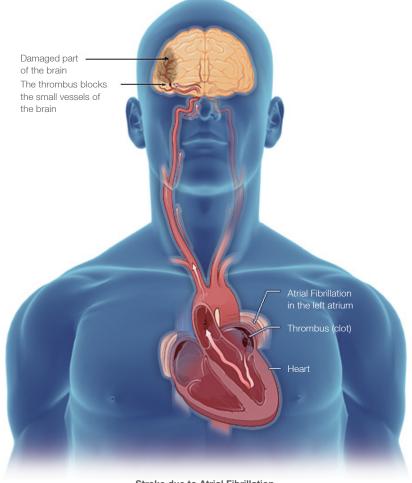
WatchBP Office WatchBP Office AFIB WatchBP Office ABI WatchBP Office Central WatchBP O3 WatchBP O3 Ambulatory WatchBP O3 AFIB WatchBP Home A WatchBP Home A BT WatchBP Home S

Early detection of Atrial Fibrillation can reduce the risk of stroke by 68%.



What is Atrial Fibrillation (AF)?

AF is the most common sustained cardiac arrhythmia occurring in 5% of the population of 65 years and above and in 14% among those older than 85 years old. AF leads to a 5-fold higher risk of stroke and is responsible for 20% of all strokes. Many people have no symptoms from AF and therefore remain undiagnosed, whereas early treatment can reduce the risk of stroke by up to 68%.



Stroke due to Atrial Fibrillation



Early detection and prevention

WatchBP monitors with Atrial Fibrillation (AF) detection system

WatchBP monitors with implemented AF detection system (AFIB) allow patients to be screened for AF during blood pressure measurement. WatchBP AFIB has consistently proven its accuracy and showed that it leads to increased detection of new patients with AF when used in general clinical practice.

Early detection of AF followed by adequate treatment can reduce the risk of a stroke by up to 68%

Wrist palpation

Wrist palpation, although commonly performed, has a low reliability.



Best clinical practice

A symbol appears on the LCD screen when AF is detected.





"WatchBP Home A should be used for hypertension monitoring in primary care"

Tested and approved for detecting Atrial Fibrillation

WatchBP AFIB detects Atrial Fibrillation with high accuracy (sensitivity 98%, specificity 92%) as demonstrated in multiple comparative studies with ECG.



Recommended by NICE

The National Institute for Health and Care Excellence (NICE) officially recommends using the WatchBP Home A during routine blood pressure measurement for all GPs in the United Kingdom.

www.nice.org.uk/MTG13

WatchBP is the only FDA and MDD cleared oscillometric BPM for atrial fibrillation screening

Advanced measurement technology

Advanced guideline-based measurements

The advantages of 3 consecutive measurements

- Superior reliability for blood pressure monitoring.
- Performing three sequential measurements diminishes the influence of an occasional deviating (high) reading.



Guidelines recommend taking at least two blood pressure readings each time and averaging the measurements, for a more reliable result.



Efficient screening for Peripheral Arterial Disease (PAD)

WatchBP monitors with Ankle Brachial Index (ABI) assessment system

WatchBP Office ABI monitors help physicians to diagnose PAD efficiently by performing ankle-arm blood pressure measurements to assess the Ankle Brachial Index. Accurate and easy to use.

Disease (PAD)? PAD is a frequently occurring

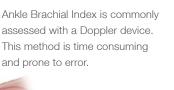
What is Peripheral Arterial

cardiovascular risk factor that often remains undetected for a long time. In fact, 50% of all patients who have it usually show no symptoms. Patients with PAD have a three-fold higher risk of myocardial infarction, stroke, and death.



Peripheral Arterial Disease (PAD)







Fatty substances on the arterial wall

> WatchBP Office ABI is easy, fast and accurate for ABI assessment

Features overview

WatchBP Office

WatchBP	3 Consecutive	Double arm	Auscultatory		ABI	РС	Bluetooth®	Central BP	S	pecial patie	ent validation	S	AOBPM *
Device	measurements	measurement	mode	detection assessment		link	connectivity	measurement	End-stage renal disease	Diabetes patients	Pregnancy & pre- eclampsia	Children	(sprint algorithm)
Office (2nd Generation)	•		•	0		•	•	0	•	•	•	•	•
Office AFIB	•	•	•	•		•			•	•	•	•	•
Office ABI	•	•		•	•	•			•	•	•	•	•
Office Central	•	•		•	•	•		•	•	•	•	•	

Optional;

WatchBP O3 Ambulatory

WatchBP	24-hour	AFIB	Central BP measurement	PC link	Bluetooth®	Night-time	Pill-button		Special pati	ent validations	
Device	ambulatory BP monitoring	detection			connectivity	measurement		End-stage renal disease		Children	
O3 (2nd Generation)	•	0	0	•	•	•	•	•	•	•	•
O3 Ambulatory	•			•		•	•	•	•	•	•
O3 AFIB	•	•		•		•	•	•	•	•	•

Optional;

WatchBP Home

WatchBP	Single	3 Consecutive	AFIB	ESH/AHA/	PC link	Spe	ecial patient valida	tions
Device	measurement	measurements	detection	BIHS Guidelines embedded		End-stage renal disease	Diabetes patients	Pregnancy & pre- eclampsia
Home	•			•	•	•	•	•
Home A		•	•	•	•	•	•	
Home A BT (Bluetooth)		•	•	•	•	•	•	
Home S		•	•			•	•	

^{*} Automated Office Blood Pressure Measurement



WatchBP Office

Guideline-Based professional blood pressure monitors



WatchBP Office



AFIB (Microlife technology)

Screens for Atrial Fibrillation during blood pressure measurement.



ABI assessment

Fast, easy and reliable simultaneous anklearm blood pressure measurement for screening of peripheral arterial disease.



Double arm measurement

Unique dual-cuff design for assessing inter-arm blood pressure differences.



Central blood pressure measurement

Non-invasive, reliable method based on brachial pulse volume plethysmography (PVP) waveforms.



3 Consecutive measurements

For accurate blood pressure measurement and better AF detection.



PC link

Transmit all measurement data to PC via USB connection.



Auscultatory mode

For use in e.g. elderly, obese and those with arrhythmia.



Sprint algorithm

Enables Automated Office Blood Pressure Measurement including the "Sprint Algorithm" (5 min countdown time followed by 3 consecutive measurements with a 1 minute interval between each reading).



Available models



WatchBP Office

Accurate automated office blood pressure (AOBP) monitor with flexible measurement schedule options.



WatchBP Office AFIB

Dual-cuff blood pressure monitor with Atrial Fibrillation detection and auscultatory measurement function.



WatchBP Office ABI

Cardiovascular screening device. Dual-cuff blood pressure monitor with Atrial Fibrillation detection and Ankle-Brachial Index function.



WatchBP Office Central

Cardiovascular screening solution. Dual-cuff blood pressure monitor with Atrial Fibrillation detection. Ankle-Brachial Index assessment and central blood pressure measurement function.

WatchBP	3 Consecutive		Auscultatory		ABI	PC	Bluetooth®	Central BP	S	pecial patie	ent validation	s	AOBPM *
Device	measurements	measurement	mode	detection	assessment	link	connectivity	measurement	End-stage renal disease	Diabetes patients	Pregnancy & pre- eclampsia	Children	(sprint algorithm)
Office (2nd Generation)	•		•	0		•	•	0	•	•	•	•	•
Office AFIB	•	•	•	•		•			•	•	•	•	•
Office ABI	•	•		•	•	•			•	•	•	•	•
Office Central	•	•		•	•	•		•	•	•	•	•	

Optional;

^{*} Automated Office Blood Pressure Measurement

WatchBP Office

Professional automated office blood pressure monitor





AFIB





Flexible BPM schedule



Central blood pressure 3 Consecutive measurement





measurements



Sprint algorithm



PC link



mode



For use in end stage renal disease



For use in pregnancy



For use in children



For use in diabetes patients

- Flexible measurement schedule.
- Possibility to perform (up to 6 cycle measurements) auscultatory blood pressure measurement.
- Non-invasive central blood pressure measurement (optional).
- Atrial Fibrillation (AF) detection (optional).



Flexible BPM schedule

Clinical Blood pressure measurement can be done in many ways. Unfortunately, there is no consensus between different hypertension authorities in how blood pressure should be measured in clinical practice. Recommendations differ with respect to the number of measurements needed from 2 -6 measurements but also for the required interval time between measurements varying from 30 seconds to 5 minutes. Currently, several medical societies also plea for the performances of unattended blood pressure measurement. This means that the healthcare professional must activate the blood pressure monitor before leaving the room so that sequential measurements are taken after a certain countdown period.

To help physicians all over the world adhering to these different measurement recommendations Microlife has developed a professional blood pressure monitor with a flexible measurement schedule. With this unique option the professional is free to select the preferred number of measurements, the interval time between measurement, the count-down period and even the way the average blood pressure value is calculated.



Central blood pressure

Central blood pressure is the pressure in the aorta, the largest artery that originates from the heart. Central blood pressure measurement may better correlate with cardiovascular risk than upper arm blood pressure measurement because the aorta is closer to the heart and brain, the most vital organs of the body.



Customisable measurement functions

Customize your ABPM according to your needs with additional, helpful technology features:

- Atrial Fibrillation (AF) detection.
- Central blood pressure measurement.

Features overview

WatchBP AFIB Centra			Flexible		Rechargeable		Bluetooth	WatchBP	S	pecial patien	t validations	
Office			BPM schedule	mode	battery	connectivity	connectivity	Analyzer	End-stage renal disease	Diabetes patients	Pregnancy & pre- eclampsia	Children
Standard			•	•	•	•	•	•	•	•	•	•
AFIB	•		•	•	•	•	•	•	•	•	•	•
AFIB & CBP	•	•	•	•	•	•	•	•	•	•	•	•



WatchBP Office AFIB









AFIB



3 Consecutive Measurements



For use in end stage renal disease



For use in Pregnancy



For use in Children



Diabetes patients



Double Arm Measurement



Auscultatory Mode



PC Link



Sprint Algorithm

Screen for AFIB & IAD

A leading risk factor for stroke

- Atrial Fibrillation (AF) detection.
- Dual-cuff design for simultaneous measurement on both arms to assess the Inter-Arm Difference (IAD).
- Auscultatory mode, for use in the elderly, the obese, and those with arrhythmia.
- Software CD included, and can also be downloaded from the website: www.microlife.com/support/software-professional-products



Atrial Fibrillation detection

WatchBP AFIB detects Atrial Fibrillation with high accuracy (sensitivity 98% - specificity 92%) as demonstrated in multiple comparative studies with ECG (See "References" p33).



The most reliable Tool for determining Inter-arm blood pressure differences

Inter-arm difference (IAD) in blood pressure is an important cardiovascular risk predictor. Therefore, blood pressure must be measured in both arms at the first clinical visit.

IAD Threshold									
Systolic	Diastolic								
≧ 20mmHg	≧ 10mmHg								



For use in diabetes patients

Microlife blood pressure monitors are validated for blood pressure measurement in patients with diabetes.



For use in children

WatchBP devices are validated for blood pressure measurement in children from the age of 3 years old.



Operation mode

Mode	Measurements	Interval time	AFIB	Double arm measurement	PC link
Routine	3	15" Default 30"/45"/60"/300" Selectable	•		•
Auscult.	1				
Screen	3	15" Default 30"/45"/60"/300" Selectable	•	•	•

WatchBP Office ABI

Cardiovascular screening device





AFIB



3 Consecutive measurements



For use in end stage renal disease



pregnancy



For use in children



diabetes patients



Double arm measurement



PC link

Sprint algorithm

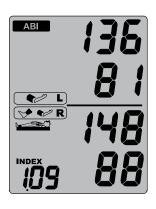
- Fast, easy and accurate Ankle Brachial Index (ABI) assessment.
- ✓ Atrial Fibrillation (AF) detection.
- Dual-cuff design for simultaneous measurement on both arms to assess the Inter-Arm-Difference (IAD).
- Software CD included, and can also be downloaded from the website: www.microlife.com/support/software-professional-products



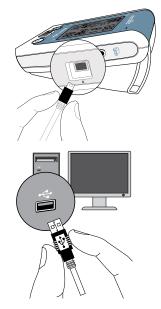
Ankle Brachial Index Assessment: Screening for Peripheral Arterial Disease

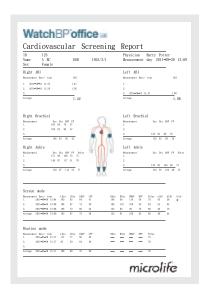
Presentation of the measurement results

On the blood pressure monitor











Operation mode

Mode	Measurements	Interval time	ABI assessment	AFIB	Double arm measurement	PC link
ABI	1		•			•
Routine	3	15" Default 30"/45"/60"/300" Selectable		•		•
Screen	3	15" Default 30"/45"/60"/300" Selectable		•	•	•



WatchBP Office Central

Cardiovascular screening device





ΔFIR



3 Consecutive measurements



For use in end stage renal disease



For use in pregnancy



For use in children



For use in diabetes patients



Double arm measurement



PC link



Central blood pressure measurement

- ✓ Non-invasive central blood pressure measurement.
- ✓ Fast, easy and accurate Ankle Brachial Index (ABI) assessment.
- Atrial Fibrillation (AF) detection.
- Dual-cuff design for simultaneous measurement on both arms to assess the Inter-Arm-Difference (IAD).



Central blood pressure

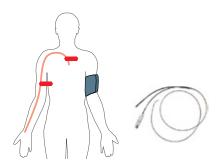
Central blood pressure is the pressure in the aorta, the largest artery that originates from the heart. Central blood pressure measurement may better correlate with cardiovascular risk than upper arm blood pressure measurement because the aorta is closer to the heart and brain, the most vital organs of the body.

WatchBP Office Central has surpassed all requirements for international standards





The aorta distributes oxygenated blood to all parts of the body.



WatchBP Office Central has been validated against intra-arterial blood pressure measurement.

Operation mode



Mode	Measurements	Interval time	Central BP measurement	ABI assessment	AFIB	Double arm measurement	PC link
ABI	1			•			•
Central	2	15" Default 30"/45"/60" Selectable	•				•
Screen	3	15" Default 30"/45"/60" Selectable			•	•	•



WatchBP 03

24-hour blood pressure measurement



WatchBP 03



Screens for Atrial Fibrillation during blood pressure measurement.



Pill-button

For recording medication intake.



Night-time measurement

For measuring blood pressure during sleep.



Upgradeable device version

Customize your ABPM according to your needs with additional, helpful technology features.



Bluetooth® connectivity

Results are transferred to smartphone, PC, Hub by Bluetooth.



PC link

Transmit all measurement data to PC via USB connection.



Available models



WatchBP 03

Professional 24-hour ambulatory blood pressure monitor with upgradeable functions for Atrial Fibrillation detection and central blood pressure measurement.



WatchBP O3 Ambulatory

24-hour ambulatory blood pressure monitor.

WatchBP O3 AFIB

24-hour ambulatory blood pressure monitor with atrial fibrillation detection.

WatchBP	24-hour	AFIB	Central BP	PC link	Bluetooth®	Night-time	Pill-button	Special patient validations			
Device	ambulatory BP monitoring	detection	measurement		connectivity	measurement		End-stage renal disease	Diabetes patients	Pregnancy & pre- eclampsia	Children
O3 (2nd Generation)	•	0	0	•	•	•	•	•	•	•	•
O3 Ambulatory	•			•		•	•	•	•	•	•
O3 AFIB	•	•		•		•	•	•	•	•	•

Optional;

WatchBP 03

Professional 24-hour blood pressure monitor











24-hour ABPM Central blood pressure Upgradeable



measurement



device version



Pill button



PC link



Bluetooth® connectivity



For use in end stage renal disease



For use in children



Pill / Event button for recording medication intake and occurrence of unusual events.

- Reliable AFIB screening (optional).
- Non-invasive central blood pressure measurement (optional).
- ✓ USB and Bluetooth® 4.2 connectivity.
- WatchBP Analyzer software, can be downloaded from the website: free of charge: https://www.microlife.com/support/software-professional-products



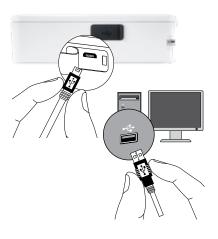


Customisable measurement functions

Customize your ABPM according to your needs with additional, helpful technology features:

- Atrial Fibrillation (AF) detection.
- Central blood pressure measurement.

USB interface



Bluetooth® connectivity





Pill / Event button

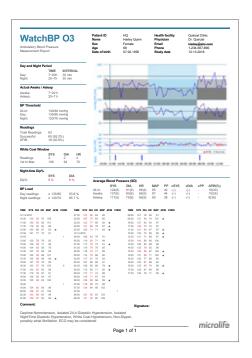
for recording medication intake or to remember certain events.



WatchBP Analyzer



Easy to read one page PDF report



Features overview

WatchBP AFIE O3	AFIB	AFIB Central BP		Pill /Event	t Silent mode		Bluetooth	WatchBP Analyzer	Special patient validations			
			ABPM button			connectivity	connectivity 4.2 connectivity		End-stage renal disease	Diabetes patients	Pregnancy & pre- eclampsia	Children
Standard			•	•	•	•	•	•	•	•	•	•
AFIB	•		•	•	•	•	•	•	•	•	•	•
AFIB & CBP	•	•	•	•	•	•	•	•	•	•	•	•

WatchBP 03 Ambulatory

Professional 24-hour blood pressure monitor











- Highly affordable.
- Fully-programmable.
- Lightweight and compact.
- Pill / Event recording button.
- PC connectivity via USB.
- Reports provided in PDF, common data exchange format (.csv file), and also compatible with LibreOffice/OpenOffice software.
- Atrial Fibrillation detection (optional)
- Software CD included, and can also be downloaded from the website: www.microlife.com/support/software-professional-products



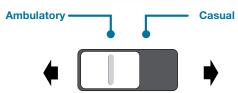
Night-time measurement

Accurate day and night blood pressure measurements.

- measuring blood pressure during sleep.
- Collects accurate day and night blood pressure measurements for a complete overview of the daily blood pressure pattern.

WatchBP O3 validated ambulatory blood pressure monitor



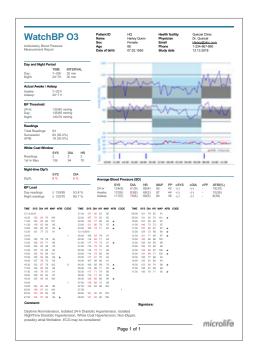


USB interface





Easy to read one page PDF report





for recording medication intake or to remember certain events.





WatchBP Home

For the best selfmeasurement of blood pressure at home



WatchBP Home



AFIB

Screens for Atrial Fibrillation during blood pressure measurement.



3 Consecutive measurements

For accurate blood pressure measurement and better Atrial Fibrillation (AF) detection.



Bluetooth® connectivity

Results are transferred to smartphone, PC, Hub by Bluetooth.



ESH/AHA/BIHS guidelines embedded

Helps patients to perform 7-day self-measurement according to ESH/AHA/BIHS guidelines.



PC link

Transmit all measurement data to PC via USB connection.



Available models



WatchBP Home

Monitoring hypertension and suitable for use in pregnancy and pre-eclampsia.



WatchBP Home A

Monitoring hypertension and Atrial Fibrillation.



WatchBP Home A BT

Helps to collect accurate day blood pressure measurements for a good overview of the daily blood pressure pattern.



WatchBP Home S

Simultaneously screening for hypertension and Atrial Fibrillation at home. Animated reminder to warn for risk factors.

WatchBP Device	Single	3 Consecutive	AFIB detection	ESH/AHA/	PC link	Special patient validations			
	measurement	measurements		BIHS Guidelines embedded		End-stage renal disease	Diabetes patients	Pregnancy & pre- eclampsia	
Home	•			•	•	•	•	•	
Home A		•	•	•	•	•	•		
Home A BT (Bluetooth)		•	•	•	•	•	•		
Home S		•	•			•	•		

WatchBP Home





ESH/AHA/BIHS guidelines embedded



PC link



For use in end stage renal disease



For use in pregnancy



For use in diabetes patients



Diagnostic mode

7-day self-measurement program that strictly follows ESH/AHA/BIHS guidelines.

			7 working days at home										
		1	2	3	4	5	6	7					
※	Morning 06:00 ~ 09:00	V	¥	~	~	~	~	~					
)	Night 18:00 ~ 21:00	A	V	V	V	V	V	~					

1 measurement = 2 readings



Usual mode

For single measurement at any time (250 memory).

Microlife WatchBP Home, also accurate for use in pregnancy and pre-eclampsia



WatchBP Home A











3 Consecutive measurements



embedded



PC link





For use in diabetes patients



Diagnostic mode (with AFIB)

7-day self-measurement program that strictly follows ESH/AHA/BIHS guidelines.



Usual mode (with AFIB)

3 consecutive measurements for screening for Atrial Fibrillation (250 memory).

WatchBP Analyzer Home A



WatchBP Home A BT





Bluetooth® connectivity



AFIB



3 Consecutive measurements



ESH/AHA/BIHS guidelines embedded



PC link



For use in end stage renal disease



For use in diabetes patients

WatchBP Analyzer Home A BT

microlife



Diagnostic mode (with AFIB)

7-day self-measurement program that strictly follows ESH/AHA/BIHS guidelines.



Usual mode (with AFIB)

3 consecutive measurements for screening for Atrial Fibrillation (250 memory).

How does a connected health solution work?



Blood pressure measurements and AF screening are performed.



Results are transferred to smartphone, PC or Hub.



From the device the data are transmitted to the cloud.



74

The healthcare professional receives the data.

By Microlife

By Health care provider



WatchBP Home S







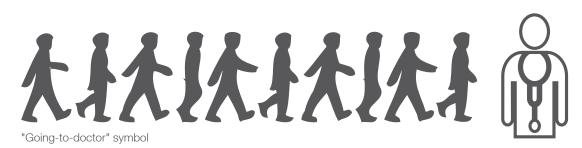


renal disease



Home blood pressure monitor with Atrial Fibrillation detection function

- Measuring blood pressure and screening for Atrial Fibrillation at the same time.
- Solution Easy, reliable and affordable automated blood pressure measurement device.
- ✓ With "Going-to-doctor" alert to inform a doctor's visit is required because of atrial fibrillation or persistent high blood pressure values.



WatchBP Cuffs

The cuff is as important as the blood pressure monitor itself. Using the right size cuff helps to prevent erroneous blood pressure measurements.

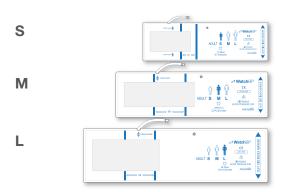


WatchBP Cuffs

- Latex-free and PVC-free.
- Washable cuffs available in both nylon and cotton.
- Disposable cuffs available (for single patient use).

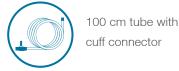
WatchBP Disposable cuffs

Upper arm – Single patient use (For WatchBP Office series)



Tube with cuff connector





WatchBP Office Cuffs

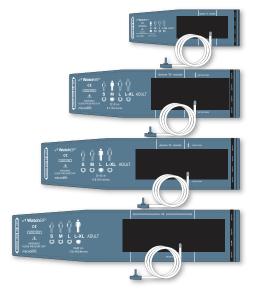
Upper arm - Soft



M

L

L-XL*



Cuff connector

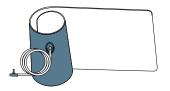


For Office AFIB, Office ABI, Office Central

Upper arm - Rigid

M-L

With air tube 130 cm for Office AFIB, Office ABI, Office Central



Cuff connector



For Office AFIB, Office ABI, Office Central

Ankle - Soft

M



Tube with cuff connector

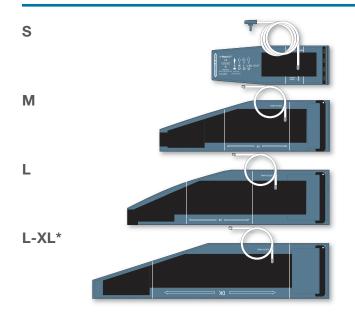


170 cm tube with cuff connector



WatchBP O3 Ambulatory Cuffs

Upper arm - Soft

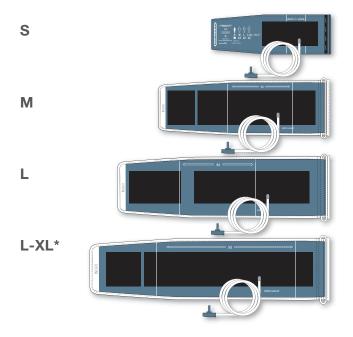


Tube with cuff connector



WatchBP Home Cuffs

Upper arm - Soft



Tube with cuff connector



80 cm tube with cuff connector

Cuff			Ankle cuff				
Size	s	М	M-L	L	L-XL	М	L
Measures (cm)	14-22	22-32	22-42	32-42	32-52	22-32	32-42
Measures (inches)	5.5-8.7	8.7-12.6	8.7-16.5	12.6-16.5	12.6-20.5	8.7-12.6	12.6-16.5

 $^{^{\}ast}$ the L-XL cuff has been validated for use among patients with large arms.



Reference

Microlife validation studies

- Halfon M, et al. Use of oscillometric devices in atrial fibrillation: a comparison of three devices and invasive blood pressure measurement. Blood pressure. 2017:1-8.
- Bing S, et al. Validation of the Microlife BP A200 Comfort and W2 Slim automated blood pressure monitors in a general adult population according to the European Society of Hypertension and the ANSI/AAMI/ISO 81060-2: 2013 protocols. Blood Press Monit. 2016;21:118-123
- 3. Nathan HL, et al. An accurate semiautomated oscillometric blood pressure device for use in pregnancy (including pre-eclampsia) in a low-income and middle-income country population: the Microlife 3AS1-2. Blood Press Monit. 2015;20:52-55.
- 4. Nathan HL, et al. Accuracy validation of the Microlife 3AS1-2 blood pressure device in a pregnant population with low blood pressure. Blood Press Monit. 2015;20:299-302.
- 5. Gandolfo C, et al. Validation of a simple method for atrial fibrillation screening in patients with stroke. Neurological sciences: official journal of the Italian Neurological Society and of the Italian Society of Clinical Neurophysiology. 2015;36:1675-1678.
- 6. Cheng HM, et al. Measurement accuracy of a stand-alone oscillometric central blood pressure monitor: a validation report for Microlife WatchBP Office Central. Am J Hypertens. 2013;26:42-50.
- 7. Stergiou GS, et al. Accuracy of automated oscillometric blood pressure measurement in patients with atrial fibrillation: 1a.04. Journal of Hypertension. 2011;29:e2.
- 8. Saladini F, et al. Accuracy of Microlife WatchBP Office ABI monitor assessed according to the 2002 European Society of Hypertension protocol and the British Hypertension Society protocol. Blood Press Monit. 2011;16:258-261.
- 9. Masiero S, et al. Accuracy of the Microlife large-extra large-sized cuff (32-52 cm) coupled to an automatic oscillometric device. Blood Press Monit. 2011;16:99-102.
- 10. Kollias A, et al. Automated determination of the ankle-brachial index using an oscillometric blood pressure monitor: validation vs. Doppler measurement and cardiovascular risk factor profile. Hypertens Res. 2011;34:825-830.
- 11. Stergiou GS, et al. Are there really differences between home and daytime ambulatory blood pressure? Comparison using a novel dual-mode ambulatory and home monitor. J Hum Hypertens. 2010;24:207-212.
- 12. Ragazzo F, et al. Validation of the Microlife WatchBP O3 device for clinic, home, and ambulatory blood pressure measurement, according to the International Protocol. Blood Press Monit. 2010;15:59-62.
- 13. Bonso E, et al. Accuracy of a single rigid conical cuff with standard-size bladder coupled to an automatic oscillometric device over a wide range of arm circumferences. Hypertens Res. 2010;33:1186-1191.
- 14. Palatini P, et al. Validation of Microlife BP W100 wrist device assessed according to the European Society of Hypertension and the British Hypertension Society protocols. Blood Press Monit. 2009;14:41-44.
- 15. Chung Y, et al. Validation and compliance of a home monitoring device in pregnancy: microlife WatchBP home. Hypertens Pregnancy. 2009;28:348-359.
- 16. Stergiou GS, et al. Validation of the Microlife Watch BP Office professional device for office blood pressure measurement according to the International protocol. Blood Press Monit. 2008;13:299-303.
- 17. Palatini P, et al. Validation of the Microlife BP W200-1 wrist device for blood pressure measurement. Blood Press Monit. 2008;13:295-
- 18. Thompson AM, et al. Validation of an oscillometric home blood pressure monitor in an end-stage renal disease population and the effect of arterial stiffness on its accuracy. Blood Press Monit. 2007;12:227-232.
- 19. Stergiou GS, et al. Validation of the Microlife WatchBP Home device for self home blood pressure measurement according to the International Protocol. Blood Press Monit. 2007;12:185-188.
- 20. Belghazi J, et al. Validation of four automatic devices for self-measurement of blood pressure according to the International Protocol of the European Society of Hypertension. Vasc Health Risk Manag. 2007;3:389-400.
- 21. Stergiou GS, et al. Validation of the Microlife BPA100 Plus device for self-home blood pressure measurement according to the International Protocol. Blood Press Monit. 2006;11:157-160.
- 22. de Greeff A, et al. The Microlife 3AC1: An accurate blood pressure measurement device in pregnancy and pre-eclampsia. J Hypertens 2006:24.
- 23. Topouchian JA, et al. Validation of two devices for self-measurement of brachial blood pressure according to the International Protocol of the European Society of Hypertension: the SEINEX SE-9400 and the Microlife BP 3AC1-1. Blood Press Monit. 2005;10:325-331.
- 24. Reinders A, et al. An accurate automated blood pressure device for use in pregnancy and pre-eclampsia: the Microlife 3BTO-A. BJOG. 2005:112:915-920.
- 25. El Assaad MA, et al. Validation of the Microlife BP 3AC1-1 (R) device for blood pressure measurement according to the International validation Protocol. American Journal of Hypertension. 2003;16:47A-47A.
- 26. Cuckson AC, et al. Validation of the Microlife BP 3BTO-A oscillometric blood pressure monitoring device according to a modified British Hypertension Society protocol. Blood Press Monit. 2002;7:319-324.

Microlife AFIB accuracy and screening studies

- Wiesel J, et al. Screening for Atrial Fibrillation in Patients >/=65 Years Using an Automatic Blood Pressure Monitor in a Skilled Nursing Facility. Am J Cardiol. 2017;120:1322-1324.
- Halfon M, et al. Use of oscillometric devices in atrial fibrillation: a comparison of three devices and invasive blood pressure measurement. Blood pressure. 2017:1-8.
- 3. Chan PH, et al. Diagnostic performance of an automatic blood pressure measurement device, Microlife WatchBP Home A, for atrial fibrillation screening in a real-world primary care setting. BMJ open. 2017;7:e013685.
- 4. Chan PH, et al. Head-to-Head Comparison of the AliveCor Heart Monitor and Microlife WatchBP Office AFIB for Atrial Fibrillation Screening in a Primary Care Setting. Circulation. 2017;135:110-112.
- Verberk WJ, et al. Screening for atrial fibrillation with automated blood pressure measurement: Research evidence and practice recommendations. Int J Cardiol. 2016;203:465-473.
- 6. Twigg MJ, et al. Identification of patients with atrial fibrillation in UK community pharmacy: an evaluation of a new service. Int J Clin Pharm. 2016;38:784-787.
- 7. Omboni S, et al. Opportunistic screening of atrial fibrillation by automatic blood pressure measurement in the community. BMJ open. 2016;6:e010745.
- 8. Gandolfo C, et al. Validation of a simple method for atrial fibrillation screening in patients with stroke. Neurological sciences: official journal of the Italian Neurological Society and of the Italian Society of Clinical Neurophysiology. 2015;36:1675-1678.
- 9. Willits I, et al. WatchBP Home A for opportunistically detecting atrial fibrillation during diagnosis and monitoring of hypertension: a NICE Medical Technology Guidance. Applied health economics and health policy. 2014;12:255-265.
- 10. Wiesel J, et al. Comparison of the Microlife blood pressure monitor with the Omron blood pressure monitor for detecting atrial fibrillation. Am J Cardiol. 2014;114:1046-1048.
- 11. Kearley K, et al. Triage tests for identifying atrial fibrillation in primary care: a diagnostic accuracy study comparing single-lead ECG and modified BP monitors. BMJ open. 2014;4:e004565.
- 12. Wiesel J, et al. Screening for asymptomatic atrial fibrillation while monitoring the blood pressure at home: trial of regular versus irregular pulse for prevention of stroke (TRIPPS 2.0). Am J Cardiol. 2013;111:1598-1601.
- 13. NICE. WatchBP Home A for opportunistically detecting atrial fibrillation during diagnosis and monitoring of hypertension http://guidance.nice.org.uk/MTG13. 2013;Assessed 18 Aug. 2015.
- 14. Ermini G, et al. Switching from traditional to automatic sphygmomanometer increases opportunistic detection of atrial fibrillation in hypertensive patients. BJMP. 2013;6:a6161.
- 15. Verberk WJ, et al. Accuracy of oscillometric blood pressure monitors for the detection of atrial fibrillation: a systematic review. Expert Rev Med Devices. 2012;9:635-640.
- 16. Stergiou GS, et al. accuracy of automated oscillometric blood pressure measurement in patients with atrial fibrillation: 1A.04. Journal of Hypertension. 2011;29:e2.
- 17. Wiesel J, et al. Detection of atrial fibrillation using a modified microlife blood pressure monitor. Am J Hypertens. 2009;22:848-852.
- 18. Stergiou GS, et al. Diagnostic accuracy of a home blood pressure monitor to detect atrial fibrillation. J Hum Hypertens. 2009;23:654-658.
- 19. Wiesel J, et al. Home monitoring with a modified automatic sphygmomanometer to detect recurrent atrial fibrillation. J Stroke Cerebrovasc Dis. 2007;16:8-13.
- 20. Wiesel J, et al. The use of a modified sphygmomanometer to detect atrial fibrillation in outpatients. Pacing Clin Electrophysiol. 2004:27:639-643.