Rossmax, a leader in the global healthcare market, is committed to developing and supplying premium diagnostic products. We focus on following business fields and the product and service portfolio consists of diagnostic solutions in the field of



From pioneering research and product development to highly efficient manufacturing, shipping and logistics, our operational excellence is a crucial key to the success. With the only fully integrated factory in the industry, we pride ourselves on worldclass manufacturing capabilities and end-to-end process controls. The distribution network covers more than 89 countries and the products are clinically validated and approved based on latest quality standards.



For further information about our complete technology portfolio, please visit www.rossmax.com/technologies

www.rossmax.com

**Rossmax International Ltd.** 12F., No.189, Kang Chien Rd. Taipei 114, Taiwan Tel +886 2 2659 7888 Fax +886 2 2659 7666 info@rossmax.com

**Rossmax Swiss GmbH** 9442 Berneck, Switzerland Tel +41 71 747 11 93 Fax +41 71 747 11 91 emea@rossmax.com



## røssmax YOUR TOTAL HEALTHSTYLE PROVIDER

prevention • monitoring • therapy • professional

## as a technology leader we are committed to assure clinical validations and approvals

### **HYPERTENSION**

## **PARR Technology**

For Arrythmia patients

Dual-sensor system



Pulse Arrhythmia (PARR) technology specifically detects pulse arrhythmia, including Atrial Fibrillation (AF, AFib), Atrial and / or Ventricular Premature Contractions (PC), Tachycardia (TACH), and Bradycardia (BRAD). Pulse Arrhythmia may be related to cardiac disorders, needs medical attention and thus early diagnosis is of paramount importance. The PARR technology detects arrhythmia during regular blood pressure checks without any additional user skills, user interaction and measurement prolongation. Beside the blood pressure determination a specific pulse arrhythmia determination is provided with PARR.



## **Digital Korotkoff Technology**



DK Technology is a combination of the traditional Oscillometric method and Korotkoff sound method. With a microphone built into the arm cuff, DK Technology actually listens like your doctor when taking a reading. Exclusive DK Technology delivers ultimate accuracy by using both pressure and sound. The monitor is supported with an advanced "dual-sensor" cuff system. It has been shown that a device using the auscultatory method has the potential to match the gold standard method more closely than devices using oscillometric methods.



HSD

## **Rest Condition Detector**



HEMODYNAMIC STABILITY DETERMINATION (HSD) - eliminates all possible blood pressure measurement error caused by mental and physical stress and avoids unnecessary multiple measurements to attain an average of your blood pressure. The lack of rest condition, which is detected by the HSD technique, is the most common error in the blood pressure diagnosis. The blood pressure results have to be obtained in sufficient rest condition in order to have an accurate medical judgement of a patient's blood pressure status.

Blood Pressure Monitor

### **Movement Detector** Body movement indication



The "Movement Detector" helps reminding the user to remain still and is indicating any body movement during measurement. The specified icon appears once a "body movement" has been detected during and after each measurement. Such detector helps to remind the user to remain still during the measurement process and increases the accuracy of the measurement.



### **Real Fuzzy** Real comfort and accuracy



Real Fuzzy Technology determines ideal cuff pressure based on one's systolic blood pressure and arm size. Users no longer need to pre-set the inflation level before measurement. The technology eliminates arm discomfort through unnecessary high inflation settings and also prevents inaccurate readings caused by erroneous cuff inflation levels.

## Digital Gauge PATENTED

## **Digital Pressure Gauge (Mandaus II)**

Convenient, durable and accurate!

Different from other gauge, the Rossmax Digital Gauge's marker feature ensures the accuracy during the measurement. The Digital Gauge is able to record the Korotkoff sound for measuring systolic / diastolic pressure and then the blood pressure would be displayed on LCD, reducing misdiagnosis resulted from time difference. The digital operation and display design clearly indicates the pressure, heartbeat and deflation rate on the same LCD display. The backlight screen design is convenient for users that need lighting. And the large, clear LCD display is also more user-friendly and is shock and water resistant for professional use.

**Talking** Full vocal guidance

> Based on personal demand the talking function can be switched on or off. The unit offers a full talking guidance from start until the blood pressure is displayed.

Blood Pressure Monitor

Blood

Blood

Pressure

Monitor

Pressure

Monitor

Blood Pressure Monitor

## **AM/PM Averaging Mode**

Advanced 7/14/21/28 day memory mode

The exclusive AM/PM averaging memory mode provides you with a variety of options for reviewing your measurement history, including AM/PM Averaging. It calculates and displays 7/14/21/28 days average for measurements taken in the morning (AM) and nighttime (PM). Blood pressures can provide important information about how your blood pressure changes throughout the day. The monitor stores 28 days of Morning and Nighttime Averages for each user.

- MORNING AVERAGES between: 4:00 AM and 11:59 AM.
- NIGHTTIME AVERAGES between: 6:00 PM and 2:00 AM

**Smart Sense** 

### Advanced air control system

Smart Sense Technology utilizes an advanced air control system. The electronic deflation valve delicately controls the deflation rate. It allows the monitor to detect and analyze pulse signals as well as adjusting cuff pressure during deflation. This significantly aids in making more precise analysis, improving accuracy silently and efficiently and is very comfortable for the user too.

## **Automatic and Auscultatory Mode** Switchable

In the auscultatory mode the cuff will be automatically inflated. During deflation the Korotkoff sound will be detected manually with the stethoscope and the marker. Systolic and Diastolic values will be displayed on the device which can be used for fully automatic measurements as well

2



HYPERTENSION















### **HYPERTENSION**

### **Additional Benefits Blood Pressure Monitors**



🐼 The Rossmax Blood Pressure Monitors are equipped with innovative blood pressure risk indicator, which visually indicates the assumed risk level (prehypertension / stage 1 hypertension / stage 2 hypertension). The ergonomic cone-shaped cuff promotes blood pressure measurement to a whole new easy and delightful experience. Knowing the importance of recalibration to the units and the users, Rossmax developed the world's first mobile calibration system. Simply connect the unit to the system, with its intuitive operation, now the recalibration is only a matter of seconds. Five years warranty is offered on the product range.

#### The 100% self-built active valve offers better pressuring control and less power consumption

Active valve	Passive valve
<ol> <li>Driven by electric power</li> <li>Normally open, but can be 100% closed</li> <li>De-pressuring rate can be controlled</li> <li>De-pressuring rate can be constant at</li></ol>	<ol> <li>No electric power is needed</li> <li>Normally open, but cannot be 100% closed</li> <li>De-pressuring rate cannot be controlled</li> <li>De-pressuring rate is high at high pressure</li></ol>
different pressure level (linear valve) ->	and low at low pressure (nonlinear valve) ->
good for blood pressure measurement	not ideal for blood pressure measurement

On all our devices the state of the art own manufactured pump offers a very low noise level

#### Advantages of own pump manufacturing

- 1. Optimized design for Blood Pressure Monitors (pressuring time, power consumption)
- 2. 100% self-built > better quality
- 3. Low noise
- 4. High reliability

#### Own cuff and bladder manufacturing

#### Any challenges with regard to cuff and bladder manufacturing we are more than keen to face

- 1. Air tightness 100% test
- 2. Bladder life sampling test (310 mmHg, pumping 10'000 times)

#### The advantages of Rossmax's tooling can be summarized as follows:

#### Advantages of own pump manufacturing

- 1. Experienced engineering resources
- 2. Sufficient CAD / CAM evaluation facility
- 3. Careful mechanical design / mockup / tray shot review
- 4. Advanced tooling building process
- 5. Precise plastic injection manufacturing
- 6. Stricter tooling / injection criteria
- 7. Complete product dropping / vibration / life / reliable test

### **Validation** Blood Pressure Monitor ESH & BHS

Internal and local validations as well as proofs from well recognized institutions (such as BHS - British Hypertension Society, ESH - European Society of Hypertension) confirm the accuracy, safety, stability, reliability and high performance of the entire product range. The Rossmax blood pressure monitors can be fully recommended for an application in the pregnant population too.

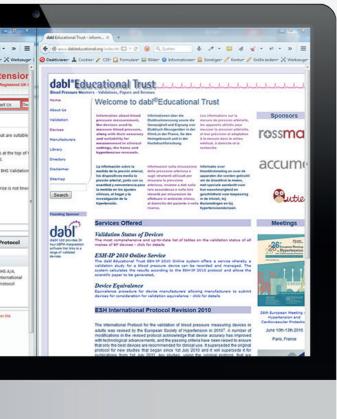
	ypertension Society :					1	
			C 🙆 Q Suche				
	BH	Station of Station of Stations	na, 🕅 poper, 🖉 po	iomationetr. Pos	British		
Home	About Us	Membership	Research	Resources	BHS Meetings	Co	ctact
<ul> <li>BP Moni</li> <li>BHS Vali</li> <li>Manufaci</li> </ul>	idation Service for				ted for Home		that
Process Monitor	for Listing BP S	may also be u	sed in the clinic.		type by using the dro		
U Later	st Guidelines	information or	each device can be	accessed by clickin	g anywhere on the in nd column have been	dividual mo	del
🕝 89 M	lonitors	devices have b	oven tested independ	Sently.			
Caler	ndar of Events	The list is orga alphabetically		in ascending order	of price. Those devi	ces where a	price
-							
FAQ			tenitors For Clinical I	Use			
	rofessionals only	See also: #P M Select the typ All Types		Use			
🕀 UK P	rofessionals only Statements	Select the typ All Types		Model		Price	Pro
🕀 UKP	Statements	Select the typ All Types	e of monitor:			Price	Pro
🕀 ukp 🔮 анз Membe		Select the typ All Types	e of monitor: Manufacturer Rossmax/Accun •			Price	Pro
🕁 UK P	Statements ers Area	Select the typ All Types	e of monitor: Manufacturer Rossmax/Accun •	Model ME/A8/AC/AD/AE	V151, MA350,	Price	Pro BHS Inter Prot



## ræssn YOUR TOTAL HEALTHSTYLE PROVIDER

### **HYPERTENSION**





ESH Validation available for Upper Arm and Wrist Watch Blood Pressure Monitors.

### FEVER

## **PLUG & SECURE Probe Cover**



For ear thermometer

The patented "PLUG & SECURE" probe cover can offer an easy and accurate ear temperature measurement. Users can easily assure the probe cover is attached and the appliance is ready to use. The welldesigned heat insulation probe can ensure accurate, consistent reading and short interval between each measurement. Clinical validation complies with ASTM 1965-98 and PrEN 12470-5.



## **Contact Free Probe Cover Replacement**



For ear thermometer

Easy to replace a new ear probe cover before each measurement without touching the probe cover film to avoid cross-contamination.

### **Continuous Ear Scanning Mode** For ear thermometer



The continuous ear scanning mode views the entire ear canal and looks for the highest temperature that can be detected. Simply press and hold the start button for 3 seconds, gently rotate the probe inside the ear canal in a circular manner and the most accurate reading will appear.

## **Advanced Infrared Measuring System**

### For non-contact temperature measurement



The advanced infrared temperature measuring technology provides safe, accurate, reliable and hygienic readings for measuring both forehead temple and object temperature. The forehead temple temperature reading lookup table was calculated and developed based on systematic skin clinical data statistics to accommodate fever and non-fever subjects, under different operating environment. The one second measurement thermometer without contacting skin is a suitable choice for obtaining body temperature and prevents cross contamination by measuring around 5 cm from the forehead temple.

### **Telephoto Temperature Measurement** For non-contact temperature measurement



Rossmax gun type non-contact temple forehead thermometer provides a consistent and longer distance (within 10 cm) temperature measurement without skin contact.



## **ACT - ARTERY CHECK TECHNOLOGY**

Monitors artery condition

ACT (Artery Check Technology) processes SpO<sub>2</sub> signals and determines the stiffness of the artery (Artery Condition) based on the derived wave form. It further classifies the arterial condition into 6 levels and presents the result in an intuitive graphical interface. Heart rate, SpO<sub>2</sub> and artery condition are available at your fingertip!

#### Calibration **Complete Line of Calibrators and Testers** Service

For blood pressure monitors, thermometers and nebulizers

In order to ensure the accuracy of each device, Rossmax developed a complete range of calibration devices and testers.







### SpO<sub>2</sub> & CALIBRATION



### INHALATION

technology

PATENTED

## Valve Adjustable Technology

Control nebulization rate

The proprietary adjustable valve is able to deliver mediations of different viscosity level according to every user's conditions and needs at ease. Our VAT technology allows users to adjust different levels of nebulization rate ranging from 0.10 – 0.40 µm at consistent particle size.

The nebulization rates can be adjusted by the user in a very easy way without exchanging parts. High nebulization rate/full open is for high viscosity medications and high breathing capacity user while low flow rate with close valve will be more appropriate for kids / infants with lower breathing capacity. Thanks to the reduction of wasted medication, VAT is also recommended for respiratory disorders such as COPD (Chronic Obstructive Pulmonary Disease) and Asthma as well as intensive use in general.

### Nebulizer

## **Mesh Technology**

Portable, guiet and convenient

Rossmax Mesh nebulizer is built with patented technology. The Mesh nebulizer uses electricity to vibrate a piezo that moves liquid formulations through a mini aperture plate to generate very fine aerosol medication for respiratory treatment. The battery operation, the portable design and the very quiet performance makes Rossmax Mesh nebulizers very convenient and effective.

Nebulizer

## **Mini Pump**

### Tailor-made for mini nebulizer



technology

The mini pump is a brand new design for small portable nebulizer. The components of the pump are of the highest quality and manufactured by Rossmax Japan. Moreover, the pump is tailor-made which means that the pump's characteristics and functionality can be set and adjusted to meet nebulizer specifications.



## **Low Noise**

With silencer and vibration-absorber design



Possibly the lowest dB value among the compressor nebulizers. All the noise and vibrations are significantly reduced via the unique silencer and vibration-absorber design.

Nebulizer Aspirator

### **Consistent Particle Size** For efficient respiratory treatment

The average particle size of our nebulizer with VA Technology is around 2.1µm (MMAD), and FPD (Fine Particle Dose) is above 81% tested by Cascade Impactor which ensures more efficient and effective treatment. Please review the table below:

Aerosol performance tested with 0.9% saline					
Cascade Impactor		Malvern Spraytec			
MMAD	FPD	Dv(50)	FPD		
2.07µm	81.39%	3.18 µm	78.1%		
FPD: Fine particle dose, the percentage of particle size less than 5.0 $\mu$ m * Tested by NB500					



**Cascade Impactor** Mechanical impact-based particle sizing method

## **3BREATH 3in1 Respiratory Solution**

Rossmax 3BREATH is a unique 3in1 compressor nebulizer integrates with a nasal washer and a nasal aspirator. It provides comprehensive, easy and convenient care for common respiratory conditions. The nasal washer can be used to clean and flush the nasal cavities and alleviate allergic symptoms; the nasal aspirator can be used to alleviate nasal congestion.





#### INHALATION







Malvern Spraytec Laser diffraction-based particle sizing method



1988	Foundation of Rossmax Taipei, Taiwan		
1992	<ul> <li>Rossmax is the first company outside Japan who manufactures WRIST BLOOD PRESSURE MONITORS and an innovative DUAL-USER MEMORY FUNCTION</li> </ul>		
1994	<ul> <li>Rossmax was granted the FDA and was the second wrist blood pressure monitor manufacturer who entered the US market</li> </ul>		
1996	• European CE MARK received and certified as a MDD COMPANY		
1997	• <b>REAL FUZZY</b> technology for upper arm blood pressure monitors		Real <b>J</b> uzzy Technology
2000	• SMART SENSE technology with advanced air control system		Smart <mark>S</mark> ense Technology
2003	DIGITAL PRESSURE GAUGE (Mandaus II)		Digital Gauge with Markers function
2005	DIGITAL KOROTKOFF TECHNOLOGY Dual Sensor System     IRREGULAR HEARTBEAT TECHNOLOGY (IHB)	(DK) Technology	
	• CAL PRO calibration system to ensure accuracy for blood pressure monitors		Mobile Calibration System
2006	• TALKING FUNCTION with full vocal guidance		
2007	VALIDATION ESH & BHS with highest possible AA grade	ESH	BHS
2008	REST CONDITION TECHNOLOGY (HSD)		К
2009	• AM/PM AVERAGING MODE		Advanced Memory Mode
2011	MOVEMENT DETECTOR TECHNOLOGY		
2012	AUTOMATIC & AUSCULTATORY SWITCHING MODE	M	2
	PLUG & SECURE PROBE COVER DESIGN	MARKER	
	CONTINUOUS SCANNING EAR MODE		0
	CONTACT FREE PROBE COVER REPLACEMENT	1XGN	
	<ul> <li>ADVANCED INFRARED MEASURING SYSTEM for non-contact thermometers</li> <li>VALVE ADJUSTABLE TECHNOLOGY to control nebulization rate</li> </ul>	Contact Free Probe Cover	technology
2013	MESH TECHNOLOGY for nebulizer		(a)
	• MINI PUMP for mini-piston nebulizer	technology	
	TELEPHOTO TEMPERATURE MEASUREMENT	ccanology	
	• THERMOCAL calibration system to ensure accuracy for thermometers		10 cm
2014	PARR TECHNOLOGY for blood pressure monitors	PARR PULSE ARRHYTHMIA TECHNOLOGY	◆AFib ◆PC ◆TACH ◆BRAD
2015	BLUETOOTH & WIRELESS OPEN APP SOLUTION		
2017	ARTERY CHECK TECHNOLOGY (ACT) for pulse oximeters	ACT	
2017	• <b>3BREATH</b> - 3in1 Respiratory Solution - nebulizer, nasal aspirator, nasal washer	ARTERY CHECK TECHNOLOGY	BREATH
		and the second se	



### **TECHNOLOGY MILESTONES**

# since 1988 ACCURACY

www.rossmax.com