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PROFESSIONAL ELECTRONIC BABY SCALE MOD. BABY02 – WU150 5 KEYS



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\ Read this manual carefully before using the instrument

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By choosing the **WUNDER** mod. **BABY02** professional electronic scale, you have purchased a high precision instrument. Since over 40 years **Wunder** has placed its experience at the service of health. This instrument is compliant with national standards in hospitals and clinics with medical class **Im** with measurement function and is calibrated in conformity with accuracy class **III**.

The instrument is characterized by the possibility of fixing the electronic terminal to the weighing platform by means of a column or else installing the terminal autonomously.

The instrument is equipped with a dual LCD electronic terminal with triple reading to simultaneously view Weight and weight difference calculation.

1. GENERAL RULES

Carefully read this manual before using the instrument as it supplies important indications concerning OPERATING SAFETY AND MAINTENANCE.

WUNDER reserves the right to modify the images in the following manual, only if they are purely aesthetic modifications and do not affect the safety and performance of the instrument, without communicating the updates promptly.

Conventions:

The following symbols have been used in this manual:

€ 0425	MEDICAL DEVICE IN COMPLIANCE WITH REGULATION (EU) 2017/745				
C E M M	INSTRUMENT SUITABLE FOR LEGAL USE, IN COMPLIANCE WITH DIRECTIVE 2014/31/EU AND EUROPEAN STANDARD EN45501				
MD	MEDICAL DEVICE				
UDI	UNIQUE DEVICE IDENTIFIER				
	INSTRUMENT IN COMPLIANCE WITH NAWI METRIC DIRECTIVE ACCURACY CLASS III 90/384 - 2014/31/UE AND THE EN45501 EU STANDARD				
<u> </u>	ATTENTION! PLACED BEFORE DETERMINING PROCEDURES. COMPLIANCE FAILURE CAN HARM THE OPERATOR OR PATIENT OR DAMAGE THE PRODUCT				
<u>X</u>	WASTE DISPOSAL IN COMPLIANCE WITH 2012/19/UE DIRECTIVE				
†	TYPE B PARTS SUPPLIED BATTERY POWER				
•	INDICATION OF WEIGHT FUNCTIONALITY →O← INDICATION OF STABLE WEIGHT				
((¿))	POSSIBLE INTERFERENCES NEAR THE INSTRUMENT DUAL INSULATION (CLASS II)				
	READ THIS MANUAL CAREFULLY BEFORE USING THE INSTRUMENT				
	MANUFACTURER: WUNDER SA.BI. SRL – VIA VECCHIA PER MONZA, 20 – TREZZO S/ADDA (MI), ITALY				

2. SAFETY



Operators must read this manual carefully, comply with the instructions it contains and become familiar with the correct use and maintenance procedures of the instrument.

The manufacturer denies all liability for any direct or indirect damage, including loss of profits, or any other commercial damage due to misuse of the product and failure to comply with the instructions given in this manual.

- · Retain this manual for consultation and as a help in staff training
- · Do not overload the instrument beyond its maximum capacity
- · Do not apply loads abruptly.
- · Do not press the keys with sharp or pointed objects
- · Do not try to open the instrument.
- Do not remove seals from the instrument.
- Do not short-circuit the battery terminals
- Use only the power supply provided by Wunder. Before using it, make sure that the local mains voltage is compatible with the voltage of the adapter shown on the identification plate
- Regularly check the integrity of the instrument's power cord and make sure it does not come in contact with hot appliances
- Make sure that the power cord does not create obstruction hazards
- · Unplug the instrument before cleaning it
- Do not place the instrument in water or other liquids
- Perform maintenance and subsequent metric verifications regularly

You must report any serious incident that has occurred in relation to the medical device supplied by us to the manufacturer and the competent authority of the Member State where you are located.

2.1 INTENDED USE

This device is intended to be used in the monitoring of the newborn, in the medical clinic, for general diagnostic purposes.

Environment of use: hospitals and specialized medical clinics. The installation room must be equipped with an electrical system that complies with the regulations in force. It is recommended to use the device in environments not exposed to magnetic interference.

Personnel destined to use the product: specialized operators and doctors who are aware of all the safety procedures for correct use.

Control and Responsibility: the medical device must be used under the supervision of a qualified doctor or qualified maintenance personnel and periodic checks that are aware of all safety procedures.

Limitations of use: this medical device can only be used as described in this manual

Useful life of the product: 7 years



The medical device requires particular electromagnetic compatibility precautions and must be installed and used according to the information provided in this document.

2.2 MANUFACTURER'S GUIDE AND DECLARATION - ELECTROMAGNETIC IMMUNITY

The electronic scale **BABY02** model is scheduled for operation in the electromagnetic environment specified below. The customer and the user should ensure that it is used in that environment

Guide and Statement of manufacturer - Electromagnetic emissions			
Emission test IEC 60601 Conformity		Electromagnetic environment guidance	
RF Emission CISPR11	Group 1	BABY 02 model uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.	
RF Emission CISPR11	Class B	The product is suitable for use in all establishments,	
Harmonic emission IEC 61000-3-2	Class A	including domestic establishments and those directly connected to the public low-voltage power supply	
Voltage fluctuations / flicker emissions IEC 61000-3-3	Compliant	network that supplies buildings used for domestic purposes.	

Guidance and manufacturer's declaration - Electromagnetic Immunity			
Immunity test	IEC 60601 Compliance level	Electromagnetic environment guidance	
Electrostatic discharges (ESD) IEC 61000-4-2	± 8 kV contact ± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV air	The floors should be made of wood, concrete or ceramic. If the floors are covered in synthetic material, the relative humidity should be at least 30%.	
Electrical fast transient / burst IEC 61000-4-4	± 2kV for power supply lines ± 1kV for input/output lines	The power supply should be of the type used typically in commercial or hospital environments.	
Surge IEC 61000-4-5	± 1kV line(s) to line(s) ± 2kV line(s) to earth	The power supply should be of the type used typically in commercial or hospital environments.	
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0% UT for 0,5 cycle 0% UT for 1 cycle 70% UT (30% dip in UT) for 25s 0% UT for 5 s Note: UT is the A. C. main voltage prior to application of the test level	The power supply should be of the type used typically in commercial or hospital environments. If the user requires continued operation, it is recommended that the product is powered from an uninterruptible power supply or a battery.	
Power frequency (50, 60 Hz) Magnetic field IEC 61000-4-8	30 A/m	The product power frequency magnetic fields should be at levels of a typical location in a typical commercial or hospital environment.	



The medical device requires particular electromagnetic compatibility precautions and must be installed and used according to the information provided in this document.

Manufacturer's guide and declaration - Electromagnetic emissions			
Immunity test	IEC 60601 Compliance Level	Electromagnetic environment-guidance	
Conducted RF IEC 61000-4-6	3Vrms 150kHz to 80MHz (for appliances that are not life supporting)	Portable and mobile RF communications equipment should be used no closer to any part of the product including cables, than the recommended separation distance calculated from the equation applicable to	
Radiated RF IEC 61000-4-3	3 V/m 80MHz to 2,7 GHz (for appliances that are not life equipment)	the frequency of the transmitter. Recommended separation distance d = 1.2 \lefty P d = 1.2 \lefty P from 80 MHz to 800 MHz d = 2.3 \lefty P from 800 MHz to 2.5 GHz P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey¹, should be less than the compliance level in each frequency range². Interference may occur in the proximity of equipment marked with the following symbol:	

¹ From 80 MHz to 800 MHz is applied the higher frequency range.

- a) The intensity of the field for fixed transmitters such as base stations for radio, mobile and cordless phones and land radio mobile, amateur radio, radio transmitters in the AM and FM and TV transmitters cannot be predicted theoretically with accuracy. To establish an electromagnetic environment due to fixed RF transmitters, it should consider the electromagnetic survey of the site. If the field strength measured at the place where you use the instrument exceeds the applicable level of compliance of the above, the device should be observed to verify normal operations. If you notice abnormal performance, it may take additional measures such as a different orientation of the device or re-locate it.
- b) The field strength over a frequency range of 150 kHz to 80 MHz should be less than 3 V/m.

²These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

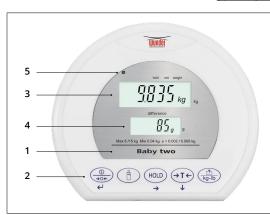
Recommended separation distance between BABY 02 scale and mobile RF communications equipment

BABY 02 scale is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the product can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the product as recommended below, according to the maximum output power of the communications equipment.

Output power	Separation distance according to frequency of transmitter (m)			
rating of the transmitter (W)	150 kHz to 80 MHz d=1,2 √P	80 MHz to 800 MHz d=1,2 √P	800 MHz to 2,5 GHz d=2,3 √P	
0,01	0,12	0,12	0,23	
0,1	0,38	0,38	0,73	
1	1,2	1,2	2,3	
10	3,8	3,8	7,3	
100	12	12	23	

For transmitters with maximum rated power output not reported above, the recommended separation distance **d** in meters (m) can be calculated using the equation applicable to the frequency of the transmitter, where **P** is the maximum rated power output of the transmitter in Watt (W) according to the manufacturer of the transmitter.

3. INDICATOR



- 1. Weighing capacity and division
- 2. Key function
- 3. Main LCD: Weight
- 4. 2° LCD automatically calculates the amount of Milk consumed
- 5. Power Indicator

FUNCTION KEYS

KEY	KEY NAME	DESCRIPTION
() → 0 ←)	ON/OFF	Key ON. To reset the display (OFF) long press 3 seconds. Zero the scale (±2% of full capacity)
HOLD →	HOLD	To hold weighing result on the display/ determine stable weighing value.
→T ←	TARE	Tare un-wanted weight
	MILK	Function Weight-Milk: automatically calculates the amount of Milk consumed
kg-lb	PRINT	Print/send data

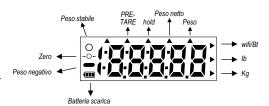
Function Display Symbols

Stable symbol: To indicate that the weight is stable.

Minus weight: Weight under zero.

Zero symbols: Weight is at zero point.

Low battery: Battery has to be charged or replaced.



4. USABILITY

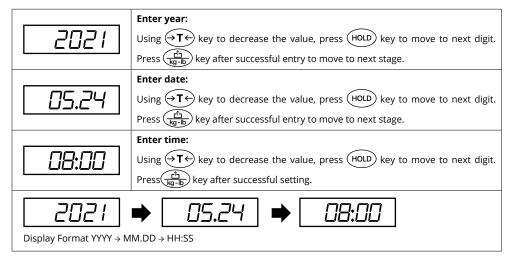
- 1. Make sure to place the instrument on a flat and stable surface away from heat sources, in an environment free of excessive vibrations and air currents.
- 2. Level the instrument to ensure correct measurement.
- 3. Connect the instrumentation to the socket with the external adapter supplied
- 4. After switching on the instrument, to obtain a correct measurement, place the infant centrally on the weighing tray with due caution.

5. ISTRUCTION FOR USE

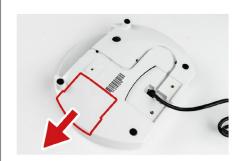
5.1 TIME SETTING

Long press (HOLD) key for 3 seconds to enter the TIME SETTING mode, beginning with the top row, with the flashing digit. Press (RG-ID) key after successful change to move to next step.

EX: To input May 24, 2021 8:00am



5.2 REPLACE ALKALINE BATTERIES WITH RECHARGEABLE BATTERY KIT (OPTIONAL)



Open the battery compartment placed on the back side of the indicator



2. Remove the alkaline batteries container carefully



3. Disconnect the connector shown in the figure



4. Connect the battery pack as shown in the figure



5. Insert the battery pack with the technical text facing upwards and the connector cable on the left. Insert the battery pack first and then gently place the cable in the bottom notch.



6. Close the battery compartment

5.3 ALKALINE BATTERIES REPLACEMENT



1. Open the battery compartment placed on the back side of the indicator



2. Remove the alkaline batteries container carefully



3. Remove the discharged batteries



4. Insert the new alkaline batteries



5. Insert the batteries container first and then gently place the cable in the bottom notch.



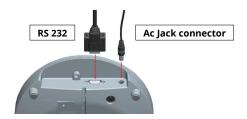
6. Close the battery compartment

5.4 INSTRUCTION FOR CHARGING AND CONNECTING

If $\frac{L \cdot D}{L \cdot D}$ prompt displays on the LCD, please charge the scale with the adaptor.

Plug the adapter on the rear side of indicator.

The battery should be recharged at least every 3 months regardless if it is used or not. After a long period in storage, e.g. over 3 months, the battery should run a full cycle (charge/discharge) to allow it to restore to full capacity.



Note: new batteries are supplied partially charged. They must be fully charged before use. In case of prolonged non-use, a complete discharge and recharge cycle should be carried out every 3 months.



FOR PROPER CHARGING OF THE BATTERY PACK, CONNECT THE INSTRUMENT TO A POWER OUTLET FOR AT LEAST 8 HOURS

5.5 WEIGHING

Switch on the scale using $\bigoplus_{0 \in \mathbb{N}}^{\mathbb{N}}$ key. The diagnostic scale self-check is performed and the software version is displayed. The "0,00 kg" weight displays on the screen, now the scale is ready for weighing.

Note: If display is not at 0.0kg while switching power on. Kindly press $(\frac{\cup}{\bigcirc)}$ key to zero the scale which can be used at any time to zero the scale.

5.6 HOLD FUNCTION

BABY02 is provided with the integrated hold function (determination of average value). It enables baby to be weighed accurately even they keep moving.

Once the **[HOLD]** key is pressed, the weight reading will remain on the display after the baby has been removed from the scale so the reading can easily be read.

- Switch 'ON' the scale using [ON/OFF]. The diagnostic self-checks is performed. The scale is ready
- for weighing when the "0.0 kg" displays on the screen. Place the baby in the center of the tray gently.
- Press (HOLD) key. The display indicates 'HOLD' with a flashing triangle. Wait for the time necessary to display the
 correct value. The operation can take up to a few minutes.
- Remove the baby from the scale tray. The weight reading will remain on the display.
- Press (HOLD) again to return to the normal weighing mode.
- HOLD function can be activated before or after putting the weight on the baby tray.

5.7 USING MEMORY FUNCTION (MILK DIFFERENCE)

This function allows automatically calculates the amount of Milk consumed

After weighting, the top row display will show the weight, for example: 3.000kg.

Press key to store the first weight, the second display will show "m1".

Removing the baby from the scale, the weight remains displayed.

After feeding, gently place the baby in the center of the plate.

Press button and the second weight will be displayed (for example: 3.180kg).

Pressing key the display will show the difference between the first and second weight.

To go back to normal mode press key.

Note:

This function is working only with continues on power. To cancel this function press



- By AC adapter: the scale still ON always.
- By battery: after not using of 3 minutes, the scale will OFF automatically, please keep touch by hand the tray.
- If the difference value is over then 1000g, the display will show

5.8 TARE FUNCTION

Tare allows the user to zero the instrument to cancel the weight of a container/ clothes from the reading of the instrument, thus giving the true weight of the product/ person being tested.

Turn on the scale using key

When displays on the screen and scale beeps twice, place the object (clothes) that need to be tare on the platform. Press \overrightarrow{T} key after the weight stabilizes and stable sign appears on the display.

Display will return to

Place the item/ baby need to be weighed (without removing the tare object). The weighing result is the Net weight of the item / baby.

To delete the saved tare value, remove the tare object from the tray and press \leftrightarrow **T** \leftrightarrow key again.

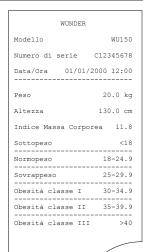
6. PRINTER FUNCTIONS

Weight can be printed for records using RS232 interface cable. After weighing simply press (kg-lb) to print out the results.

The format presented below is the standard format of results print-out and cannot be changed.

More informations:

info@wunder.it or service@wunder.it

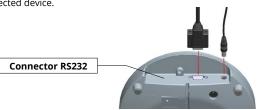


WUNDER	
Model	WU150
S/N: C12	345678
Date/Time 01/01/2000	12:00
Weight 2	0.0 kg
Height 13	0.0 cm
BMI(Body Mass Index)	11.8
Underweight	<18
Normal weight 1	8-24.9
	5-29.9
Obesity class I 3	0-34.9
Obesity class II 3	5-39.9

Set parameters of the scale interface on the connected device.

It is not possible to change the scale parameters.

Baud rate: 9600 bps
Parity check: None
Data length: 8 bits
Stop bit: 1 bit
Handshake: RTS / CTS
Data code: ASCII



Serial RS232

Connecting with PC

Start Hyper Terminal

Start Hyper Terminal program from clicking

Start Menu \rightarrow Programs \rightarrow Accessories \rightarrow Communication \rightarrow Hyper Terminal.

New Connection Description

Give new connection a name then click OK.

Select Your COM Port

Click Connect to select your COM port. Usually there's only one option for select. Then click OK.

Port Settings

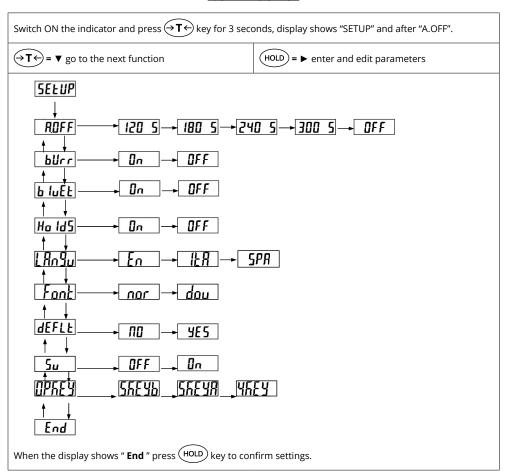
Click Bits per second to set up rate at 9600, Data bits at 8, Parity at None, Stop bits at 1 and Flow control at Hardware. Then click OK to complete your setting.

Output Data

When press the (kg-lb) key to output data from scale to PC or an Optional Printer.



7. SETTING SETUP



R.DFF: Instrument auto-off time: 120 sec, 180 sec, 240 sec, 300 sec, Off

burr: Enable or not beep (acoustic signal) operation: On/Off

b luEE: Setting Bluetooth

Ho 년5 : Setting Hold

LRngu : Setting print language

Font: Setting print font

dEFLE: Default Setup

5<u>u</u>: Self verification: On/Off

: Key option

8. ERROR MESSAGES

ERRORS	Cause	Action
Lo	Low battery: The voltage of the battery is to low for operate	Please replace the battery with a new one or plug the adapter.
Err	Overload: The load exceeds the maximum capacity of the scale	Please reduce the load and try again.
Err.H	Counting error (high): The signal from the load cell/s is too high	Error normally caused by a serious fault of the scale (load cell or wiring). Please contact the local technical service.
Err.L	Counting error (low): The signal from the load cell/s is too low	Error normally caused by a serious fault of the scale (load cell or wiring). Please contact the local technical service.
00000	Zero count over calibration zero range +10% while power ON	Please re-calibrate the scale.
00000	Zero count under calibration zero range -10% while power ON	Please re-calibrate the scale.
Err.P	Error EEPROM: indicates an error with software of the scale	Error normally caused by a serious fault of the scale (load cell or wiring). Please contact the local technical service.

9. MAINTENANCE AND ASSISTANCE

For better and longer duration of the product it should receive thorough general cleaning periodically.

The instrument must be cleaned with a soft cloth moistened with water or neutral detergent, without using solvents or abrasive substances.

If the instrument remains idle for a long period, remove the batteries from the terminal.

During shipping, make sure not to subject the instrument to blows or excessive mechanical stress.

In case of repairs or assistance, contact your dealer or an authorised service centre contacting service2@wunder.it or sales@wunder.it.

10. SCRAPPING AND WASTE DISPOSAL

If set aside for a long period, protect those parts which could be damaged due to dust build-up

Scrapping

When you decide to no longer use this item, we recommend making it unusable. We also recommend making those parts which could be sources of danger harmless



Waste disposal EU 2012/19/UE

This product complies with the **Directive 2012/19/UE**. The symbol of the crossed-out waste bin on the appliance indicates that the product, needing to be treated separately from household waste, at the end of its useful life must be completed in a separate collection facility for electric and electronic appliances or returned to the dealer upon purchase of a new equivalent appliance. The user is responsible for bringing the appliance to an appropriate collection structure at the end of its life. Appropriate separate collection and sending the appliance for recycling, treatment and environmentally compatible waste disposal contributes to avoid possible negative effects on the environment and health and favours the recycling of the materials the product is made of.

For more detailed information regarding available collection systems, contact your local waste disposal service or the shop where the product was purchased.

As consumers, you are obliged by law to return used or dead batteries. You may deposit old batteries at public collection spots in your town or else with any battery dealer who has placed specific collectors for this purpose. Even when scrapping electric and electronic appliances, they must be removed and deposited in specific collectors.

NOTE: The following symbols indicate the presence of harmful substances

Pb Pb = containing Lead Cd Cd = containing Cadmium Hg Hg = containing Mercury



Do not throw electric parts and used batteries away with household waste.

Dispose of the batteries by means of your closest collection centres.

11. WARRANTY

This certificate must be kept until the warranty has expired.

It must be presented together with the invoice, tax receipt or delivery note providing the name of the dealer and date of purchase whenever a technical intervention is required. Otherwise the user will lose any warranty rights. The warranty takes effect from the date of purchase and is valid during the entire period foreseen by the current catalogue/pricelist. By warranty we mean the replacement or repair free of charge of parts making up the appliance which, at the discretion of the manufacturer, are deemed faulty from the origin; Wunder therefore has the faculty of repairing or replacing the item.

The warranty does not cover:

- · Transport damage, fall damage, damage caused by negligence and tampering
- Damage caused by incapability of using the appliance and of its improper use
- Damage caused by an insufficient or inadequate electrical system or alterations resulting from environmental, climatic or other types of conditions
- · Damage due to incorrect installation of the appliance and repairs carried out by unauthorised personnel
- Interventions at home for convenience controls or presumed defects
- · Routine maintenance and that which can be considered normal wear from use
- Consumables such as: power supplies, batteries, keyboards, plates, wheels, heads, rolls, load cells faulty due to blows or overloads

Service can also be refused when the appliance has been changed or transformed in any way.

In case of interventions at one's home, the customer must pay the fixed fee; if however the appliance is repaired at an authorised Wunder Service Centre, expenses and relative travel risk are borne by the user.

Wunder will not be held liable for damage of any nature caused directly or indirectly to persons, animals or objects resulting from failure to comply with all the instructions indicated in this manual or anyway resulting from improper use. The Court of Bergamo has jurisdiction in case of any dispute

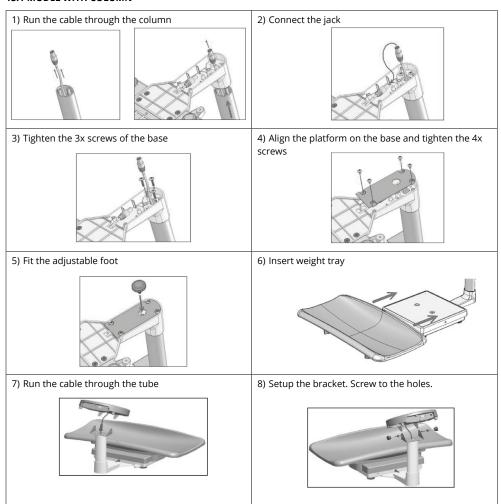
12. TECHNICAL SPECIFICATION

Model	BABY 02			
Capacity - Division	Max 3/6kg - d=1/2g 6/15kg - d=2/5g Max 10/20kg - d=5/10g			
Manufacturer	Wunder Sa.Bi. Srl - Trezzo	sull'Adda, Milano Italy		
OIML Certification	Class III			
Unit weight	kg - lb			
Display	Dual LCD: 1° LCD display Weight: 5 digit weight / 2° LCD display Weight-Milk			
Weight Surface	W560 x D290 mm			
Power	External Adapter 12V Alkaline batteries 6 x AAA (OPTIONAL) Rechargeable batteries (OPTIONAL) Only use the adapter supplied with the scale			
Operating temperature	5°C / 35°C			

13. INSTALLATION

After removing the instruments from the packing check the integrity and right contents. Put the scale far from source from of heat e vibration. Put the scale on a stable surface.

13.1 MODEL WITH COLUMN



13.2 MODEL WITH FRONT DISPLAY



N.B. The scale is already packed with the display mounted on the front support.



Don't touch the adjustment screw shown in the figure above.



Insert weight tray



! WARNING

The weighing plate **must not touch** the display for a correct functioning of the scale.

Once the weighing plate is mounted, make sure that there is at least 3cm distance between the plate and the display (figure on the right)

13.3 BABY HEIGHT ROD INSTALLATION



For the installation of digital height rod proceed as follow:



1) Apply the digital height rod support on the weighing tray using the 2 supplied cross screws.



2) Insert the digital height rod on the support previously applied to the scale's tray.

13.4 SECURITY BRACKETS INSTALLATION



1) Loosen the plate and remove the feet.



2) Place the bar and screw the adjustable feet.



3) Turn the scale and mount the plate.

14. CONFORMITY

WUNDER MODEL BABY02 ELECTRONIC SCALE SERIAL N°.....

We hereby certify that this instrument has been inspected and has successfully passed the functional test. It complies with the following standards and directives:

> EN 45501 / EN60601-1-2 / EN60601-1 REGULATION (EU) 2017/745 - Medical Device Regulation

15. IDENTIFICATION LABELS



The applied metrological plate indicates the year of manufacture (M YY) e.g. M 24 = 2024, M 25 = 2025... and so on.





Wunder Sa.Bi. S.r.l.

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