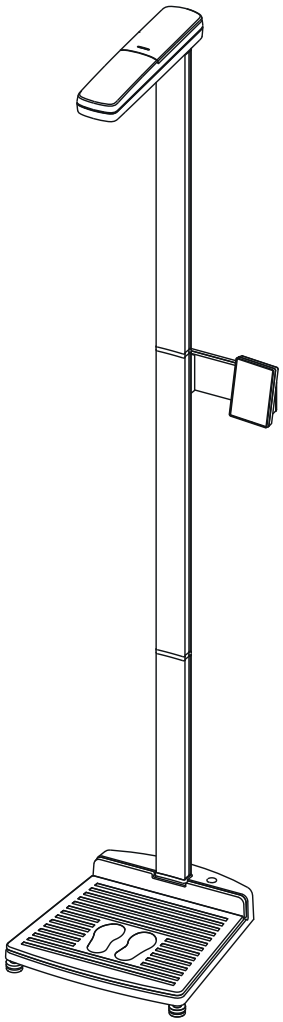
seca 286



seca®
Precision for health

CONTENTS

1. DEVICE DESCRIPTION

1.1 Intended use

The **seca 286** measuring station is used in accordance with national regulations primarily in hospitals, medical practices, in-patient care facilities and in so-called "self-screening", in which patients perform measurements themselves.

The **seca 286** measuring station is for conventional determination of weight and height and for determining the general state of nutrition; it supports the attending physician in making a diagnosis or deciding on a course of treatment.

To make an accurate diagnosis, however, the physician needs to commission other specific examinations and take their results into account, in addition to determining weight and height.

1.2 Description of function

The **seca 286** measuring station measures height using ultrasound. Weight is recorded using four load cells. The device guides the patient through the measuring process with configurable voice output. A poster and a label explaining the correct measuring operation are also enclosed.

Height is transmitted to the multifunctional display. This allows body mass index (BMI) and body fat rate (BFR) to be calculated automatically.

Measured results can be transmitted wirelessly to a seca wireless printer or to a PC equipped with a seca USB wireless adapter and compatible seca PC software via the **seca 360° wireless** network.

Use the measuring station only for the purpose mentioned in the section entitled "Intended use".

1.3 User qualification

Administration/network operation

The device may only be set up and incorporated in a network by experienced administrators or hospital technicians.

Measuring mode

The device may only be operated by healthcare professionals.

The patient can perform the measuring operation independently.

2. SAFETY INFORMATION

2.1 Safety precautions in these Instructions for Use

⚠ **DANGER!**
Used to identify an extremely hazardous situation. If you fail to take note of this information, serious irreversible or fatal injuries will occur.

⚠ **WARNING!**
Used to identify an extremely hazardous situation. If you fail to take note of this information, serious irreversible or fatal injuries may result.

⚠ **CAUTION!**
Used to identify a hazardous situation. If you fail to take note of this information, minor to moderate injuries may result.

NOTICE!
Used to identify possible incorrect usage of the device. If you fail to take note of this information, you may damage the device, or the measured results may be incorrect.

NOTE
Includes additional information about use of the device.

2.2 Basic safety precautions

Handling the device

- ► Please take note of the information in these instructions for use.
- ► Keep the instructions for use in a safe place. The instructions for use are a component of the device and must be available at all times.

DANGER!
Risk of explosion
Do not use the device in an environment in which one of the following gases has accumulated:

- ► oxygen
- ► flammable anesthetics
- ► other flammable substances/air mixtures

CAUTION!
Patient hazard, damage to device

- ► Additional devices which are connected to electrical medical devices must provide evidence of compliance with the relevant IEC or ISO standards (e.g. IEC 60950 for data-processing devices). Furthermore, all configurations must comply with the requirements of standards for medical systems (see IEC 60601-1-1 or Section 16 of the 3rd edition of IEC 60601-1 respectively). Anyone connecting additional devices to electrical medical devices is considered a system configurer and is therefore responsible for ensuring that the system complies with the requirements of standards for systems. Your attention is drawn to the fact that local laws take precedence over the above-mentioned requirements of standards. In the event of any queries, please contact your local specialist dealer or Technical Service.
- ► Have servicing carried out regularly as described in the relevant section of this document.
- ► Technical modifications may not be made to the device. The device does not contain any parts for servicing by the user. Only have servicing and repairs performed by an authorized seca service partner. You can find service partners in your area at www.seca.com or by sending an e-mail to service@seca.com.
- ► Only use original seca accessories and spare parts, otherwise seca will not grant any warranty.

CAUTION!
Patient hazard, malfunction

- ► Keep other electrical medical devices, e.g. high-frequency surgical devices, a minimum distance of approx. 1 meter away to prevent incorrect measurements or wireless transmission interference.
- ► Keep HF devices such as cell phones a minimum distance of approx. 1 meter away to prevent incorrect measurements or wireless transmission interference.
- ► The actual transmission output of HF equipment may require minimum distances of more than 1 meter. Details can be found at www.seca.com.

Preventing electric shock

WARNING!
Electric shock

- ► Set up the device so that the power supply socket is easy to reach and the device can be disconnected from the power supply quickly.
- ► Ensure that your local power supply matches the information on the power supply unit.
- ► Do not touch the power supply unit with wet hands.
- ► Do not use extension cables or power strips.
- ► Make sure that cables are not pinched or damaged by sharp edges.
- ► Make sure that cables do not come into contact with hot objects.
- ► Do not operate the device at an altitude of more than 3000 m above sea level.

Preventing injuries and infections

WARNING!
Injury from falls

- ► Ensure that the device is positioned firmly and level.
- ► Route connecting cables (if present) in such a way that neither user nor patient can trip over them.
- ► The device is not designed as a standing aid. Assist people with limited motor skills when they are getting up, e.g. from a wheelchair.
- ► Make sure that the patient does not step onto and off the weighing platform right at the edges.
- ► Make sure that the patient steps onto and off the weighing platform slowly and safely.

WARNING!
Danger of slipping

- ► Ensure that the weighing platform is dry before the patient steps onto it.
- ► Ensure that the patients feet are dry before he or she steps onto the weighing platform.
- ► Make sure that the patient steps onto and off the weighing platform slowly and safely.

CAUTION!
Hazard to patient, damage to device

The area where the patient stands consists of a glass plate. Damage to the glass plate, e.g. as a result of scratches, cracks and chips, presents a risk of injury and can lead to the glass plate breaking.

- ► Do not put any sharp-edged objects on the glass plate.
- ► Before using the device each time, check the glass plate for scratches, cracks and chips. If you find damage of this kind, have the glass plate replaced with a new one.
- ► Do not use the device if the glass plate is damaged.

WARNING!
Risk of infection

- ► Before and after every measurement, wash your hands to reduce the risk of cross-contamination and nosocomial infections.
- ► Hygienically reprocess the scale regularly as described in the respective section in this document.
- ► Make sure that the patient has no infectious diseases.
- ► Make sure that the patient has no open wounds or infectious skin alterations, which may come into contact with the device.

Preventing device damage

NOTICE!

Damage to device

- ► Ensure that fluids and dust never get inside the device and the sensors. They can damage the electronics.
- ► Switch off the device before disconnecting the power supply unit from the mains socket.
- ► Disconnect the power supply unit from the mains socket if you intend to not use the device for a longer period of time. Only this way it can be ensured that the device is currentless.
- ► Make sure not to drop the device.
- ► Do not expose the device to any impacts or vibrations.
- ► Perform function controls regularly as described in the relevant section in this document. Do not operate the device if it is damaged or not working properly.
- ► Ensure that there is no heat source in the immediate vicinity. Do not expose to direct sunlight. The excessive temperature could damage the electronics.
- ► Avoid rapid temperature fluctuations. When the device is transported so that a temperature difference of more than 20 °C occurs, it must stay turned off for at least 2 hours before it can be turned on again. Otherwise, condensation water will form which can damage the electronics.
- ► Use the device only in the ambient conditions outlined in "Intended use".
- ► Store the device only in the storage conditions outlined in "Intended use".
- ► Use only chlorine and alcohol-free disinfectants which are explicitly suitable for acrylic sheet and other sensitive surfaces (active ingredient: quaternary ammonium compounds, for example).
- ► Do not use aggressive or abrasive cleaning agents.
- ► Do not use organic solvents (e.g. white spirit or petroleum spirit).

Using the measured results

WARNING!

Patient hazard

This device is **no** diagnostic device. It simply assists the treating physician in establishing a diagnosis.

- ► In order to make a precise diagnosis and initiate therapeutic measures, besides determination of the weight, further targeted examinations must be set up by the physician, and their results must be considered.
- ► The responsibility for diagnosis and treatment lies with the treating physician.

CAUTION!

Patient hazard

In order to avoid misinterpretations, test results for medical use must be displayed and used in SI units (weight: kilogrammes, length: metres) only. Some devices offer the ability to display test results in other units. This is only an additional function.

- ► Use the results exclusively in SI units.
- ► The use of measurement results in non-SI units is the sole responsibility of the user.

NOTICE!

Inconsistent measuring results

- ► Before you electronically save measurement values determined using this device and use them further (e.g. in seca PC software or in a hospital information system), make sure that the measurement values are plausible.
- ► If measurement values are transmitted to seca PC software or a hospital information system, make sure prior to further use that the measurement values are plausible and are assigned to the correct patient.

NOTICE!

Malfunction caused by other ultrasonic emitters

If there are other ultrasonic emitters in the immediate vicinity of the device - automatic door openers, for example - faulty measurements or wireless transmission interference will occur.

- ► Ensure that there are no other ultrasonic emitters in the same room or in the immediate vicinity of the device.

WARNING!

Incorrect measurement due to reflections

If there are objects or people in the immediate vicinity of the device, incorrect measurements will result.

- ► Ensure that there are no objects or people within 0.5 meter of the front or side of the scale during the measuring process.
- ► Ensure that the device is at least 0.2 meter away from the wall.
- ► Ensure that the patient is not wearing any kind of hair accessory on top of the head.

Handling the packing material

WARNING!

Risk of suffocation

Packaging material made of plastic foil (bags) is a choking hazard.

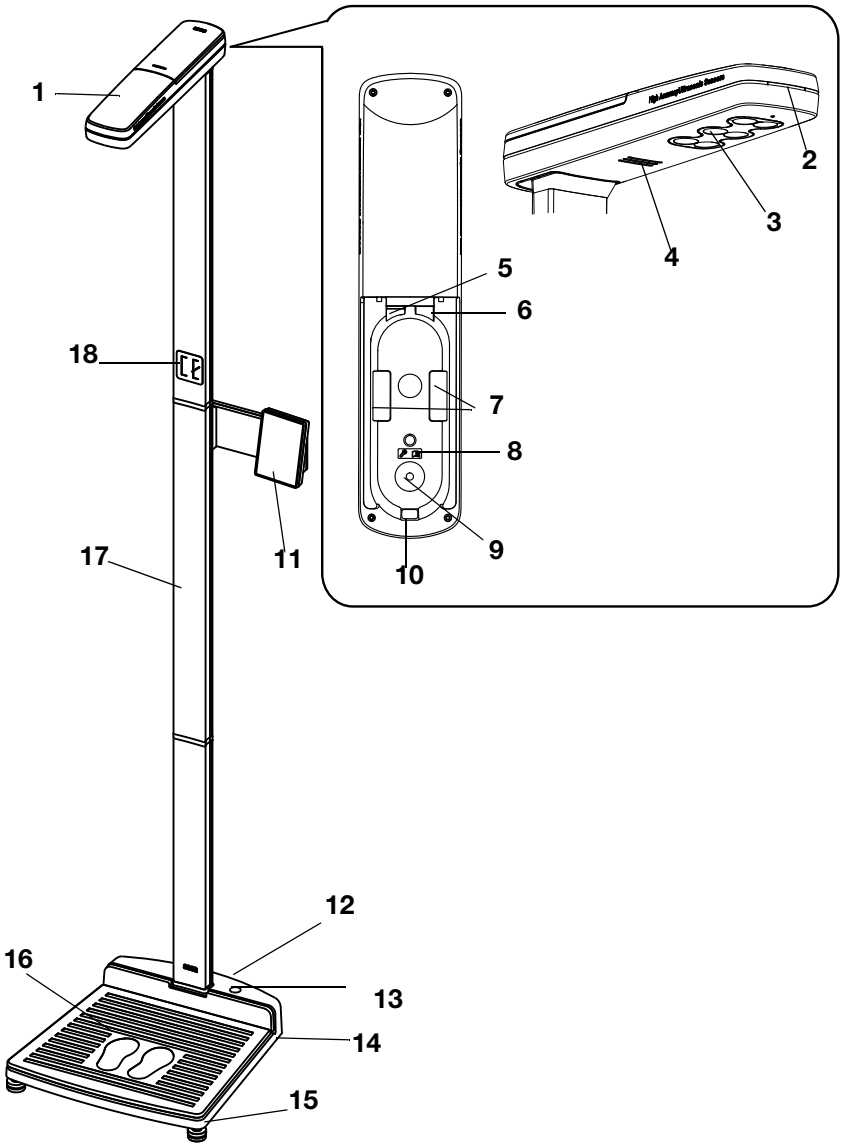
- ► Keep packaging material out of reach of children.
- ► In the event that the original packing material may not be available anymore, only use plastic bags with security holes in order to reduce the risk of suffocation. Use recyclable materials if possible.

NOTE

Keep the original packing material for future use (e.g. returning for maintenance service).

3. OVERVIEW

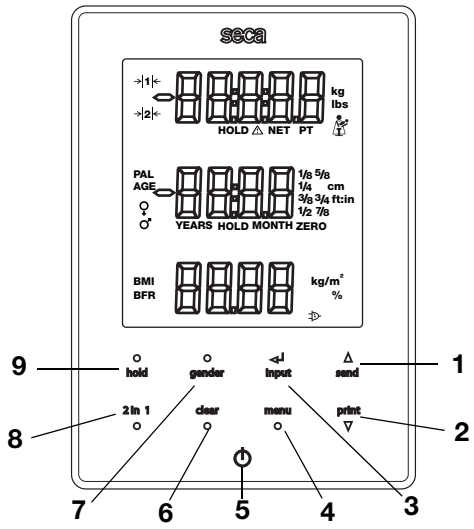
3.1 View of device



No.	Device component	Function
1	**Ultrasound head**	For measuring height
2	**Status LED**	Indicates the status of the measuring operation
3	**Ultrasound sensors**	For measuring height
4	**Loudspeaker**	For voice output
5	**Modular socket**	For connecting the modular cable (transmission of data to the multifunctional display)
6	**Service interface**	For use by seca Service
7	**Cable brackets**	For stowing the modular cable
8	**Notice**	Refers to assembly notes in the operating instructions
9	**Assembly opening**	For assembling the measuring head on the column
10	**Cable duct**	For threading the modular cable into the ultrasound head

No.	Device component	Function
11	**Multifunctional display**	Central control and display element
12	**Casters**	2 pcs, for transporting short distances
13	**Spirit level**	Indicates whether the device is horizontal
14	**Power supply connection**	For connecting the device
15	**Foot screw**	4 pcs, for precise alignment
16	**Weighing platform**	Acts as weighing element
17	**Column**	For measuring height
18	**Label: "Correct posture"**	Information on the correct posture

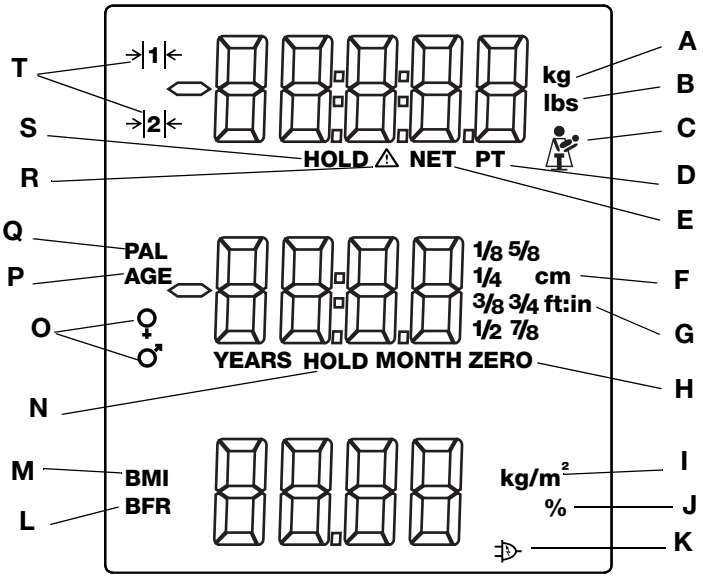
3.2 Controls



No.	Control	Function
1	▲ send	**send** arrow key • During weighing (if wireless network is set up): - send measured result to reception-ready devices (wireless printer, PC with USB wireless adapter) • In the menu: - select submenu, select menu item - increase value
2	print ▼	**print** arrow key • During weighing (if wireless network is set up): - print out measured result (wireless printer) • In the menu: - select submenu, select menu item - reduce value
3	↵ input	**input** Enter key: • During weighing: - enter patient data (age, gender, PAL) • In the menu: - confirm selected menu item - save set value

No.	Control	Function
4	menu ●	**menu** key: • During weighing: - call up control unit menu. • In the menu: - press briefly: go back one menu level - press and hold: exit menu
5	⏻	Start key, multifunctional display: switch multifunctional display and scale on and off
6	clear ●	**clear** key: for deleting data (patient data, height, BMI, BFR) entered manually or received wirelessly
7	● gender	**gender** key: for entering patient's gender
8	2 in 1 ●	**2 in 1** key: for starting the **2 in 1** function to weigh babies and toddlers
9	● hold	**hold** key: for activating the **hold** function

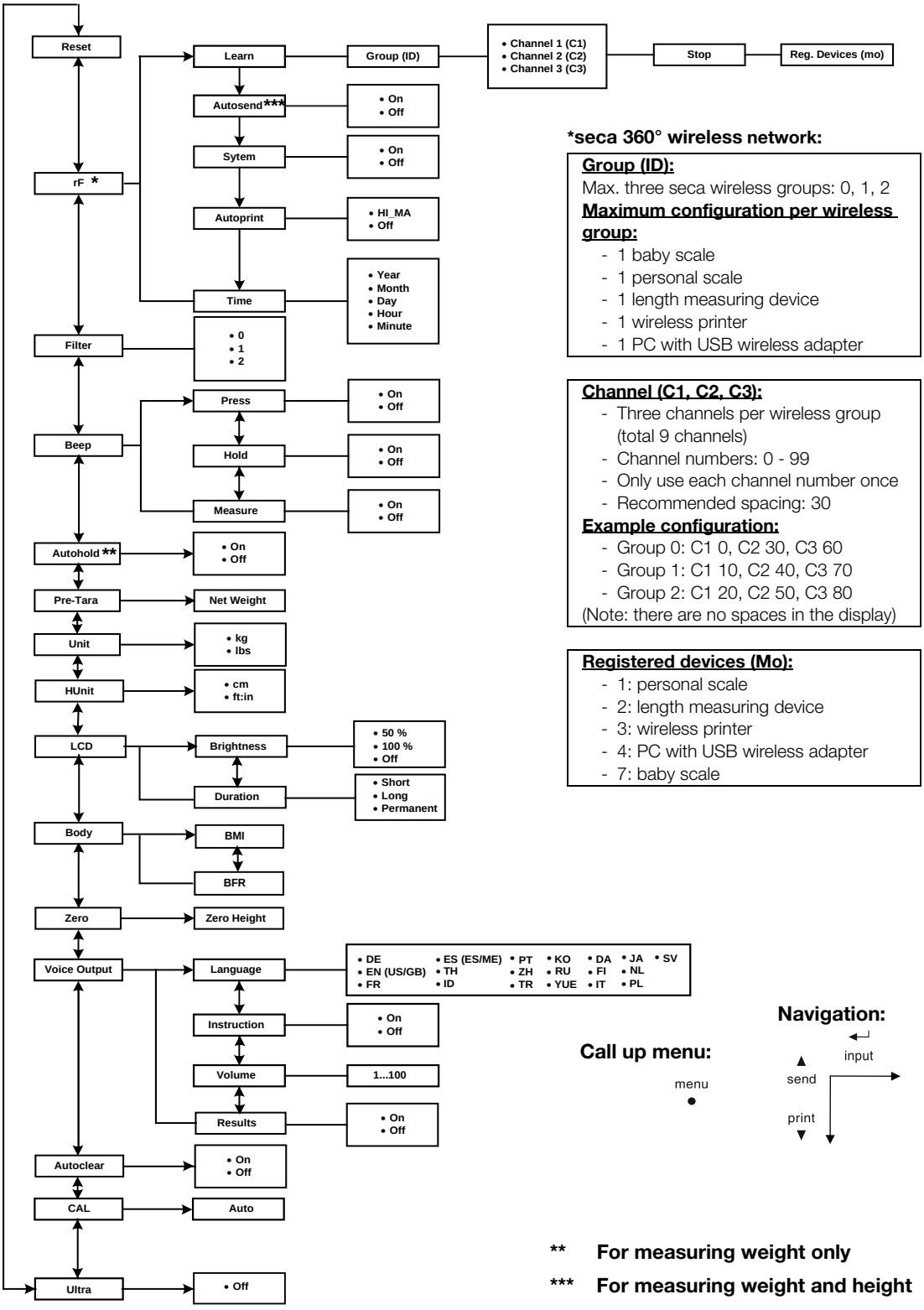
3.3 Symbols in the display



	Symbol	Meaning
A	**kg / g**	Weight value in kilograms/grams
B	**lb / lbs**	Weight value in pounds (on non-verified models)
C		Mother-and child symbol (**2 in 1** function active) to weigh babies and toddlers
D	**PT**	Pre-tare function active
E	**NET**	Tare function active
F	**cm**	Height in centimeters
G	**ft:in**	Height in feet and inches (on non-verified models)
H	**zero**	Zero point set, all heights are measured relative to this zero point. If the zero point is undershot, the measured values will be shown with a minus sign in front.
I	**kg/m²**	Unit of measurement for body mass index
J	**%**	Unit of measurement for body fat rate
K		Operation with power supply unit
L	**BFR**	Body fat rate (proportion of body fat)
M	**BMI**	Body mass index
N	**HOLD**	Hold function active
O		Patient's gender
P	**PAL**	Patient's physical activity level
Q	**AGE**	Patient's age
R		Non-verifiable function active
S	**HOLD**	Hold function is activated
T		Weighing range currently in use: 1: finer divisions of the weight display at a lower capacity 2: maximum capacity

3.4 Menu structure for multifunctional display

Other functions are available to you in the device menu. This enables you to configure the device perfectly to suit your needs (details from page 87 and from page 95).



***seca 360° wireless network:**

Group (ID):
Max. three seca wireless groups: 0, 1, 2
Maximum configuration per wireless group:
- 1 baby scale
- 1 personal scale
- 1 length measuring device
- 1 wireless printer
- 1 PC with USB wireless adapter

Channel (C1, C2, C3):
- Three channels per wireless group (total 9 channels)
- Channel numbers: 0 - 99
- Only use each channel number once
- Recommended spacing: 30

Example configuration:
- Group 0: C1 0, C2 30, C3 60
- Group 1: C1 10, C2 40, C3 70
- Group 2: C1 20, C2 50, C3 80

(Note: there are no spaces in the display)

Registered devices (Mo):
- 1: personal scale
- 2: length measuring device
- 3: wireless printer
- 4: PC with USB wireless adapter
- 7: baby scale

Call up menu:

menu

Navigation:

input
send
print

** For measuring weight only

*** For measuring weight and height

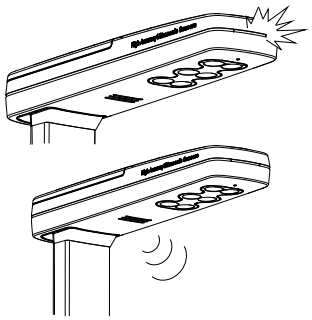
3.5 Device signals and voice output

The automatic weight and height detection of the device allows the patient to perform a measurement independently.

During the measuring operation, the device supports measurement by means of acoustic and visual signals, as well as voice output.

NOTE
The acoustic signals and voice output of the device can be configured. Details can be found in the section entitled "Configuring voice output (menu)" on page 85.

The table below is a summary of the signals and voice output of the device in the sequence of the measuring operation:



Signal/voice output	Meaning
Status LED on ultrasound head continuously on	The device is ready for measurement
"Please stand upright and look straight."	Instruction to the patient
Status LED on ultrasound head goes off	The measuring operation is in progress
"Do not move. The measurement starts now."	Instruction to the patient
Short beeps	The measuring operation is in progress
Long beep	The measuring operation is complete
"Your weight is (...) kilograms. Your height is (...) centimeters. Your Body Mass Index is (...)."	Announcement of the measured results
"The measurement is completed. Please step off the platform."	Instruction to the patient
"Take your printed ticket."	Instruction to the patient/to staff

3.6 Identification on the device ID label

Text/symbol	Meaning
	Name and address of manufacturer, date of manufacture
REF	Model number
SN	Serial number, consecutive
GAL	Value in m/s^2 (verified models) • Gravitational acceleration on earth • Depends on the intended location
ProdID	Product identification number, consecutive
Approval Type	Type designation of design approval
	Observe user manual
	Electrical medical device, type B
	Insulated device, protection class II

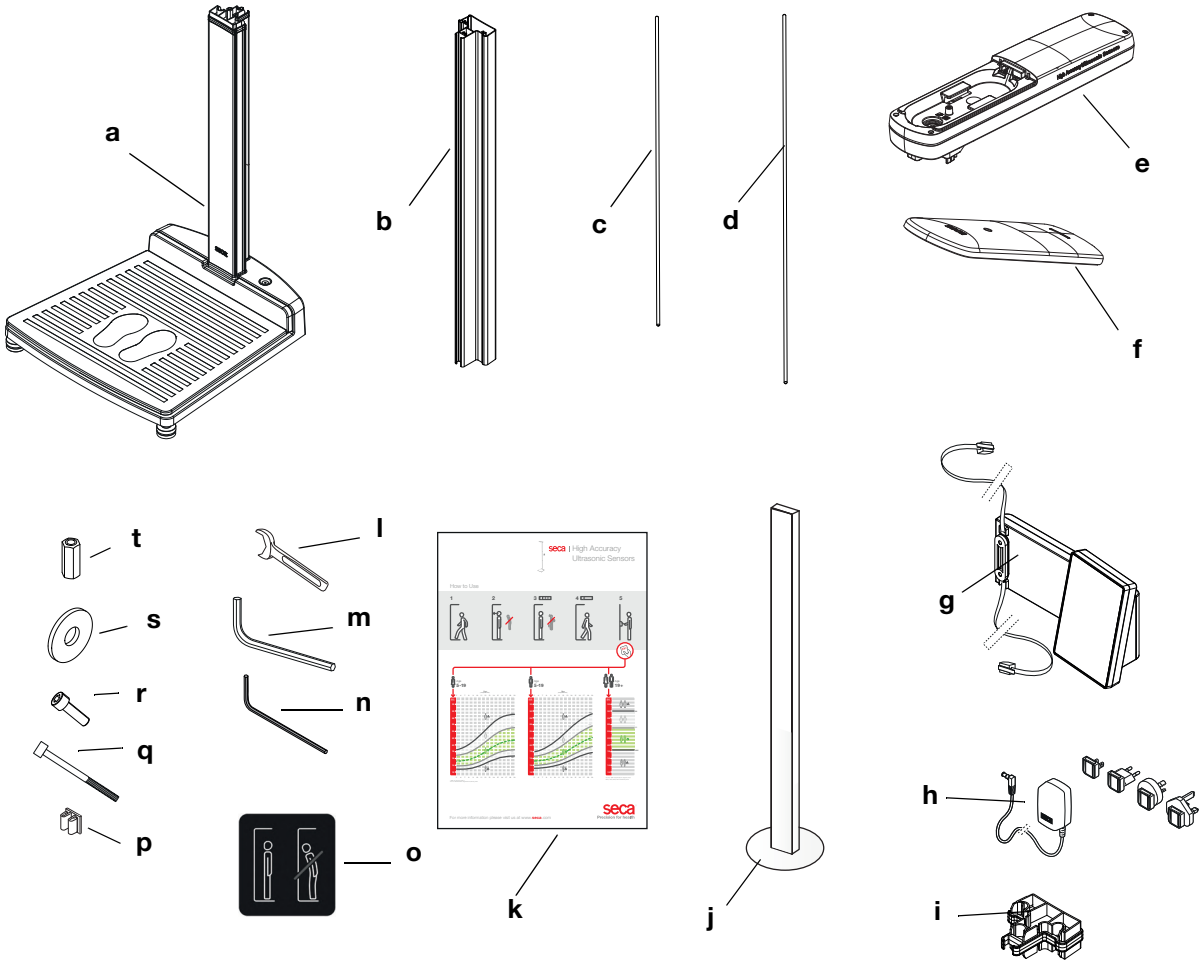
Text/symbol	Meaning
e	Value in mass units (verified models) • States the difference between two consecutive display values • Used to classify and verify a scale
d	Value in mass units (non-verified models) States the difference between two consecutive display values
→|←	Weighing range (verified models)
CE M16 0102 0123	Device conforms to EC directives. • **M**: Conformity symbol in compliance with directive 2014/31/EU for non-automatic scales (verified models) • **16**: (Example: 2016) year in which the EC calibration was performed and the CE mark was applied (verified models) • **0102**: appointed office for metrology (verified models) • **0123**: appointed office for medical devices
III	Class III scale to Directive 2009/23/EC and OIML R76-1 (verified models)
FC	FCC symbol (USA)
FCC ID	For USA: device license number from the Federal Communications Commission (FCC)
IC	For Canada: device license number from Industry Canada
INMETRO	The device meets the requirements of the Instituto Nacional de Metrologia, Qualidade e Tecnologia [National Institute of Metrology, Quality and Technology (Inmetro, Brazil)] for weighing technology
ANATEL HHHH-AA-FFFF	The device meets the requirements of the Agência Nacional de Telecomunicações [National Telecommunications Agency (ANATEL), Brazil]. Details of the wireless device license: - HHHH: license number of device - AA: year of license - FFFF: identification number of the manufacturer
PCT	The device meets the regulatory requirements of GOST R certification (Russia)
GOST	The device is licensed by the Russian federal institute for technical regulation and metrology (Russia
PA	License number of the Chinese Pharmaceutical Association (CPA)
x-y V ⎓ max. xxx mA use compatible seca adapter only	Rating plate on the power supply connection socket • **x-y V**: required supply voltage • **max xx A**: maximum current consumption • −⊂+ : note polarity of device plug • ⎓ : operate device with direct current
	Do not dispose of device with household waste

3.7 Identification on the packaging

	Protect from moisture
	Arrows indicate top of product. Transport and store in an upright position.
	Fragile Do not throw or drop.
	Permitted min. and max. temperature for transport and storage
	Permitted min. and max. moisture for transport and storage
	Open packaging here
	Packaging material can be disposed of through recycling programs

4. BEFORE YOU REALLY GET STARTED ...

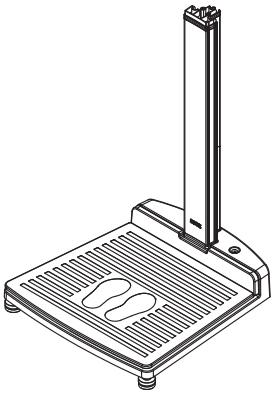
4.1 Scope of delivery



No.	Component	Pcs.
a	Lower part of housing, first column element preassembled	1
b	Column element	2
c	Threaded rod, short	1
d	Threaded rod, long	1
e	Ultrasound head	1
f	Ultrasound head cover	1
g	Multifunctional display with power supply connection cable and modular cable	1
h	Power supply unit with adapters	1
i	Column connector	1
j	Reference measuring device	1
k	Poster: "Quick guide to measuring"	1
l	Open-ended wrench	1
m	Hex socket wrench, large	1
n	Hex socket wrench, small	1
o	Label: "Correct posture"	1
p	Cable clips	5

No.	Component	Pcs.
q	Cylinder bolt for ultrasound head cover	1
r	Hex socket bolts for multifunctional display	2
s	Plain washer	1
t	Connecting nut	2
-	Optional cover for the multifunctional display	1
-	Operating instructions, not shown	1

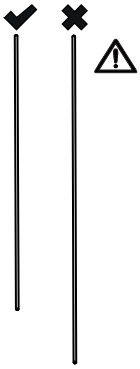
4.2 Assembling the device



The first column element is fitted to the lower part of the device at the factory.

Use an assistant to perform the rest of the assembly. Because the assembled product is very tall, we recommend placing the components on the floor and only standing the device up once it is fully assembled. Proceed as outlined below.

Fitting the second column element



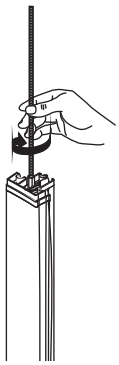
ATTENTION!

Device damage as a result of assembly error

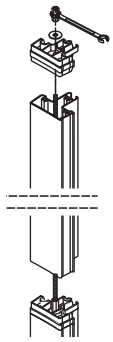
If the long and short threaded rods are switched, it will not be possible to assemble the device so that it is fit for purpose.

► Ensure that the short threaded rod is fitted when assembling the second column element (see "Scope of delivery" on page 69).

To fit the second column element, proceed as outlined below.



1. Screw the short threaded rod hand-tight into the connecting nut of the first column element.



2. Push the column element over the threaded rod onto the first column element.
3. Place the column connector on the second column element in such a way that the threaded rod protrudes out of the bore in the column connector.
4. Screw the connecting nut onto the threaded rod.
5. Tighten the connecting nut.

Fitting the multifunctional display

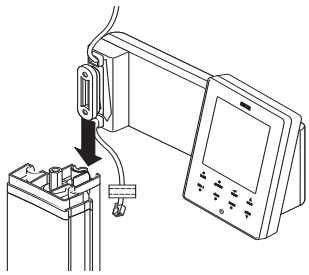
The multifunctional display is suspended in the groove of the column elements and fixed in position with a screw clamp.

ATTENTION!

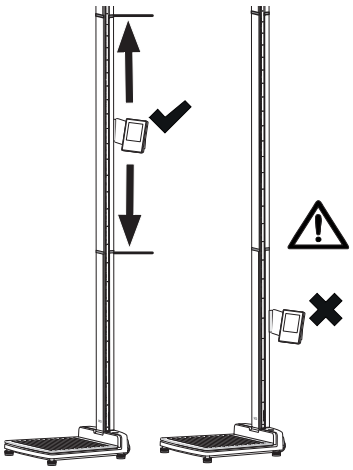
Malfunction as a result of reflecting multifunctional display

If the multifunctional display is fitted to the first column element, faulty measurements will result.

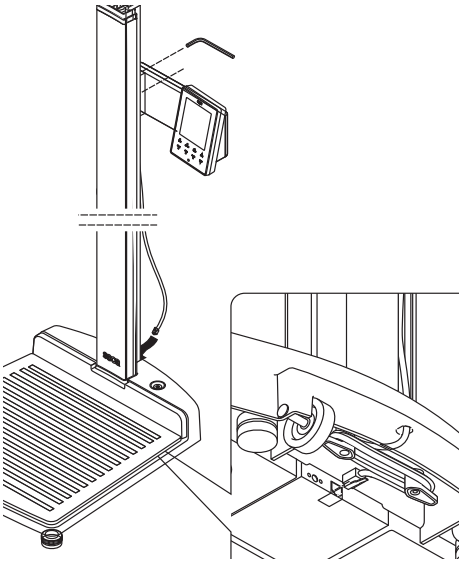
► Fit the multifunctional display to the second column element.



1. Insert the tenon block of the multifunctional display in the groove of the second column element.



2. Slide the display until it is at the right height for you.



3. Tighten up the two hex socket bolts to fix the multifunctional display in the desired position.
4. Route the power supply connection cable of the multifunctional display in the groove of the column elements as far as the lower part of the device.
5. Draw the power supply connection cable through the bore of the lower part of the device.

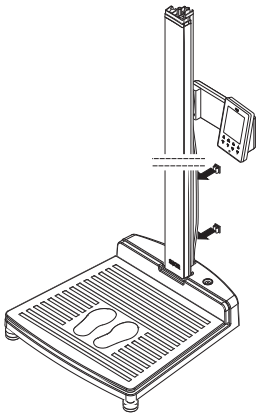
ATTENTION!

Malfunction as a result of assembly error

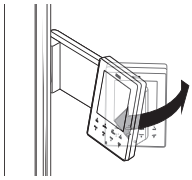
If the cables are fitted under severe mechanical load, faulty displays and failure of the display may result.

► Lay all cables so that they are not excessively bent and so that connectors are not snapped off.

6. Wind the free end of the power supply connection cable onto the cable store in the lower part of the housing.
7. Plug the connector of the power supply connection cable into the appropriate socket of the weighing platform.

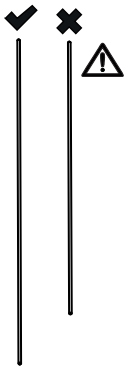


8. Fix the power supply connection cable in the groove of the column elements using the two cable clips.



9. Swivel the multifunctional display so that is convenient for you to read.

Fitting the third column element



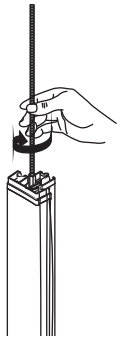
ATTENTION!

Device damage as a result of assembly error

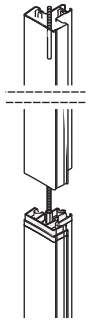
If the long and short threaded rods are switched, it will not be possible to assemble the device so that it is fit for purpose.

► Ensure that the long threaded rod is fitted when assembling the third column element (see "Scope of delivery" on page 69).

To fit the third column element, proceed as outlined below.



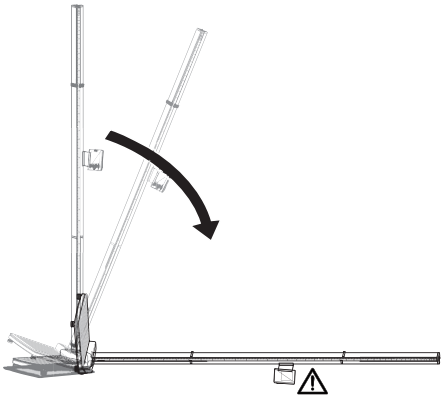
1. Screw the long threaded rod hand-tight into the connecting nut of the second column element.



2. Push the third column element over the threaded rod onto the column connector of the second column element.

Fitting the ultrasound head

The ultrasound head is fitted to the third column element and connected to the modular cable of the multifunctional display.



ATTENTION!

Device damage as a result of assembly error

The third column element is loose on the second column element.

► Hold the third column element firmly as you lay the device on the floor.

► Ensure that the third column element is in the right position before you fit the ultrasound head.

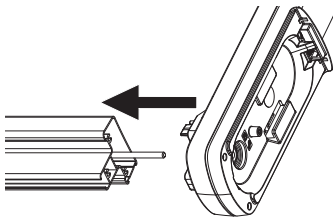
ATTENTION!

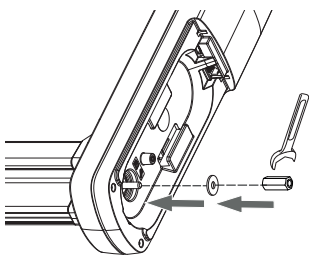
Malfunction as a result of faulty multifunctional display

When the device is laid down, the multifunctional display is directly on the floor and may be damaged.

► Lay the device down slowly and carefully on a soft surface, a blanket, for example.

1. Tilt the device and carefully lay it on the floor.
2. Push the ultrasound head onto the free end of the threaded rod.





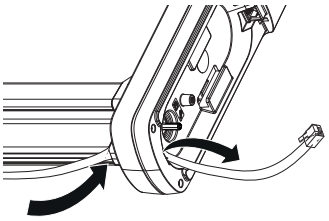
3. Put the plain washer onto the threaded rod.
4. Screw the connecting nut onto the threaded rod.
5. Tighten the connecting nut.

ATTENTION!

Damage to device and malfunction as a result of assembly error

If the connecting nut in the ultrasound head is not tightened enough, the column elements will be too loosely connected. The device will be unstable and faulty measurements will occur.

► Tighten up the connecting nut so that the columns are firmly located on one another and there is no gap between the column connector and the third column element.

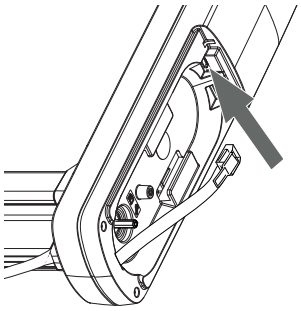


6. Push the modular cable of the multifunctional display through the cable duct in the ultrasound head.

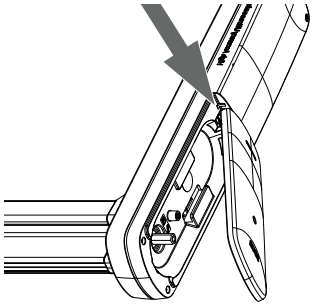
ATTENTION!

Damage to device and malfunction as a result of trapped modular cable

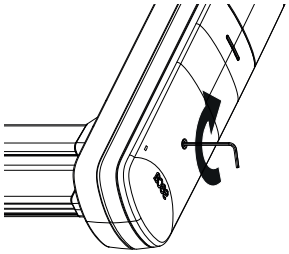
► Before closing the cover, route the modular cable in the cable compartment in such a way that it cannot be trapped between the cover and the cable compartment.



7. Plug the modular cable connector in the left-hand modular socket.
8. If the modular cable is too long, loop it into the cable compartment of the ultrasound head.



9. Put on the cover for the ultrasound head as shown in the adjacent illustration.



10. Screw the ultrasound head tight as shown in the adjacent illustration.

Setting up the device

1. Carefully return the device to an upright position.

ATTENTION!

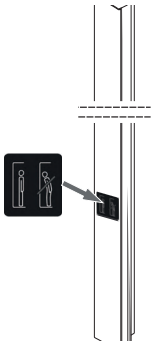
Incorrect measurement as a result of force shunt

If the glass plate is not located purely on the lower part of the device, but is blocked by a cable, for example, weight will not be measured correctly.

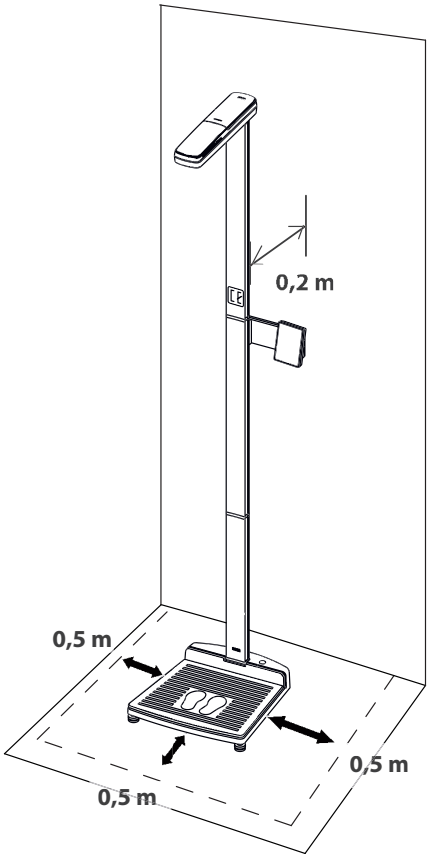
► Set up the device so that only its foot screws are in contact with the floor.

► Set up the device so that the glass plate is in free contact with the lower part of the device.

2. Place the device on a firm, level surface.



3. Affix the "Correct posture" label to the third column element.



NOTICE!

Malfunction caused by other ultrasonic emitters

If there are other ultrasonic emitters in the immediate vicinity of the device - automatic door openers, for example - faulty measurements or wireless transmission interference will occur.

► Ensure that there are no other ultrasonic emitters in the same room or in the immediate vicinity of the device.

WARNING!

Incorrect measurement due to reflections

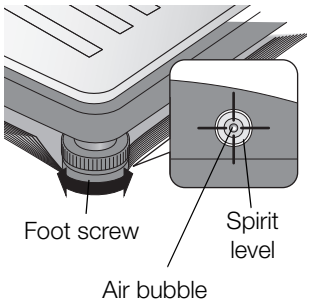
If there are objects or people in the immediate vicinity of the device, incorrect measurements will result.

► Ensure that there are no objects or people within 0.5 meter of the front or side of the scale during the measuring process.

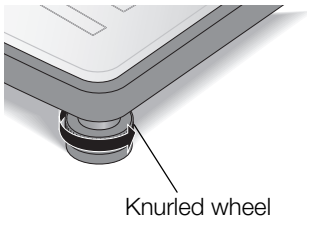
► Ensure that the device is at least 0.2 meter away from the wall.

► Ensure that the patient is not wearing any kind of hair accessory on top of the head.

4. Mark the area shown in the illustration using colored adhesive tape, for example.



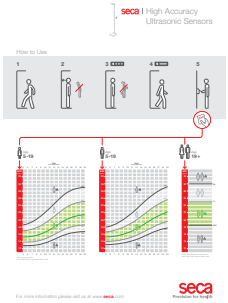
5. Align the device by turning the foot screws.
   The air bubble in the spirit level must be located in the exact center of the circle.



6. Tighten the knurled wheels in the direction of the arrow.
   The foot screws are secured against being adjusted.

Quick guide

The quick guide poster shows the patient the sequence of the measuring operation.



► Place the "Quick guide to measuring" poster in a clearly visible location close to the device.

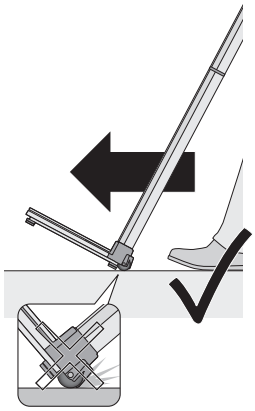
Disinfecting the device

► Disinfect the following components **before** initial commissioning as described in the section entitled "Disinfecting" on page 98:
- Column and multifunctional display
- Ultrasound head
- Column elements

4.3 Transporting the device

The device is equipped with two casters to facilitate transport over short distances.

CAUTION!
Risk of injury and damage to device
The device must be tilted for transport. The significant height of the assembled device can lead to injuries and damage to the device.
► Ensure that there is no-one else in the immediate vicinity.
► Ensure that there are no objects in the immediate vicinity.



1. Disconnect the power supply unit from the socket.
2. Tilt the device until it can be moved freely on the casters.
3. Transport the device to its new location.
4. Set the device in an upright position.
5. Plug the power supply unit into a power supply socket.

In order to achieve accurate measured results, the floor at the setup location must be level and stable. Soft floors (wooden hallways, for example) give under the patient's weight and falsify the measured result.

4.4 Establishing power supply

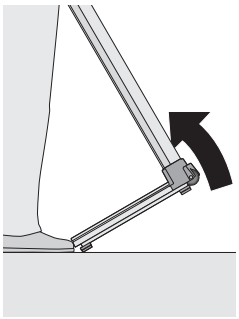
The device is powered by a power supply unit.

The connection for the power supply unit is located underneath the lower part of the device. To establish the power supply, proceed as outlined below.

CAUTION!
Risk of injury and damage to device
The device must be tilted. The significant height of the assembled device can lead to injuries and damage to the device.

► Ensure that there is no-one else in the immediate vicinity.

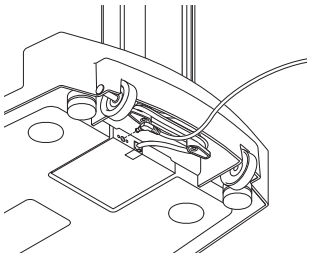
► Ensure that there are no objects in the immediate vicinity.



1. Tilt the device so that the power supply connection socket is accessible.

ATTENTION!
Damage to device as a result of excessive voltage
Commercially-available power supply units may deliver a higher voltage than they quote. The scale may overheat, catch fire, melt or short-circuit.

► Use only original seca plug-in power supply units with controlled 12 V output voltage.



2. Insert the device connector of the power supply unit into the power supply connecting socket of the scale.
3. Carefully return the device to an upright position.
4. Plug the power supply unit into a power supply socket.

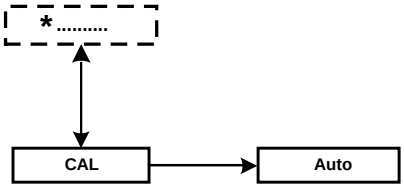
5. OPERATION

5.1 Calibrating height measurement

Before performing a measurement with the device for the first time, you need to calibrate height measurement. You do this by "teaching" the device a reference measurement.

NOTE:
Perform calibration at least once a year to achieve perfect measured results.

You can perform calibration of height measurement automatically in the menu.

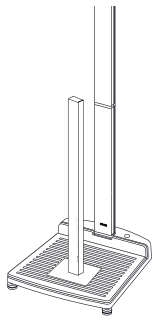


* Information on how to navigate in the multifunctional display menu can be found on page 84.

1. Ensure that there is no load on the scale.
2. Switch on the device (see "Switching on the device" on page 79).
3. Select the item "CAL" from the menu.
4. Confirm your selection.

5. Use the (**hold/zero**) arrow key to select the menu item "AUtO".

6. Confirm your selection.
   The message "CAL 0.0" is displayed.
7. Wait until the message "CAL 81.5" is displayed.
8. Place the reference measuring device supplied centrally on the foot pictogram of the lower part of the device.



NOTE:
Ensure that there are no objects or people in the immediate vicinity of the device during the calibration process (see "Setting up the device" on page 74).

9. Wait until the message "rEAdY" is displayed.

NOTE:
If the message "FAIL" appears instead of the message "rEAdY", read the information in the section entitled "What do I do if...?" from page 99 and repeat the calibration process.

10. Remove the reference measuring device from the lower part of the device.
    The device restarts automatically and is then ready to measure.

5.2 Measuring

Switching on the device

1. Ensure that there is no load on the scale.
2. Press the Start key ⏻ of the multifunctional display.

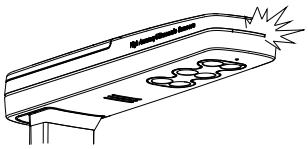
   All the elements of the display are shown briefly, then **seca** appears in the display.
   The scale is operational when **0.00** appears in the display.

Performing the measuring operation

The measuring sequence described below is based on the factory settings. You can find configuration options in the sections entitled "Configuring voice output (menu)" from page 85 and "Other functions (menu)" from page 87.

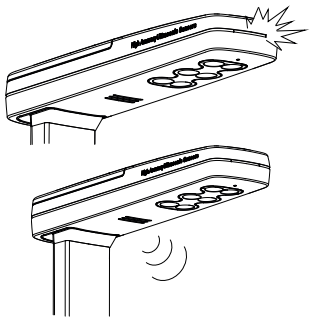
WARNING!
Incorrect measurement due to reflections
If there are objects or people in the immediate vicinity of the device, incorrect measurements will result.

- ► Ensure that there are no objects or people within 0.5 meter of the front or side of the scale during the measuring process.
- ► Ensure that the device is at least 0.2 meter away from the wall.
- ► Ensure that the patient is not wearing any kind of hair accessory on top of the head.



1. Switch on the device (see "Switching on the device").
2. Ensure that the status LED on the ultrasound head is on.
3. If required, put the optional cover on the multifunctional display if you want to stop unauthorized people reading the measured results.
4. Ask the patient to step onto the scale.

5. Ensure that the patient steps forward onto the measuring station and adopts an upright posture.
6. Ensure that the patient is standing on the marked area (foot pictogram) of the weighing platform.



7. Ask the patient to follow the instructions given by the device.
8. Read off the measured result and take the printed ticket.

NOTE:
The measured result can be printed out if a seca wireless printer is integrated in the wireless group. For a description of how to integrate a printer in the wireless group, see the section entitled "The seca 360° wireless network" from page 94.

Activating/deactivating key lock

Key lock enables you to prevent undesired settings being made to the multifunctional display once the device has been switched on.

NOTE:

- No separate symbol for activated key lock appears in the multifunctional display.
- Key lock cannot be activated while you are navigating in the menu.

1. Ensure that the device is switched off.
2. Press the Start key ⏻ of the multifunctional display.
3. Wait until the display **seca** appears.
4. Press the **menu** key of the multifunctional display.
   Key lock is switched on.

menu
●

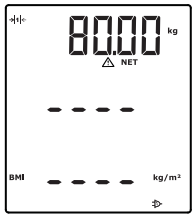
5. To cancel key lock again, restart the device by pressing the ⏻ key of the multifunctional display.
6. Wait until the display **seca** appears.
7. Press the **menu** key of the multifunctional display.
   Key lock is switched off.

menu
●

Weighing babies/toddlers (2-in-1)

The **2 in 1** function can be used to determine the weight of babies and toddlers. The child is held in an adult's arms during weighing to do so. Proceed as outlined below.

1. Ensure that there is no load on the scale.
2. Switch on the device (see "Switching on the device" on page 79).
3. Ask the adult to stand on the scale.
   The adult's weight is displayed.
4. Press the **2 in 1** key.
   The weight is saved.
   0.00, the ⚠ symbol (non-verifiable function) and the message "NET" appear in the display.

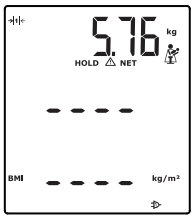


2 in 1
●

ATTENTION!
Incorrect measurement as a result of initial weight changing
If weighing of the child commences with a different initial weight, it will not be possible to determine the child's weight correctly.

- ► Ensure that the child is always weighed with the adult with whom the initial weight was determined.
- ► Ensure that the adult's weight does not change - as a result of their taking off a piece of clothing, for example.

5. Ask the adult to get onto the scale holding the child.
   The child's weight is displayed.
   The symbol, the ⚠ symbol and the messages "HOLD" and "NET" are displayed.



6. Ask the adult to get off the scale with the child.
7. To deactivate the **2 in 1** function, press the **2 in 1** key or switch off the scale.

2 in 1
●

Keep the weight permanently in the display (HOLD)

When you activate the HOLD function, the weight value continues to be displayed after the load is removed from the scale. This enables you to attend to the patient before recording the weight.

NOTE:
The HOLD function can only be activated manually for the weight value. The height value is displayed until the patient leaves the weighing platform.

1. Ensure that there is no load on the scale.
2. Switch on the device (see "Switching on the device" on page 79).
3. Ask the patient to step onto the scale.
4. Press the **hold** key.
   The display flashes until a stable weight is measured. The weight is then continuously displayed. The ⚠ symbol (non-verifiable function) and the message "HOLD" are displayed.

5. To deactivate the HOLD function, press the **hold** key.
   The ⚠ symbol and the "HOLD" message are no longer displayed.

NOTE:
When the Autohold function is activated, the weight value is automatically displayed permanently as soon as a stable measured result has been achieved (see "Activating the Autohold (AHOLd) function" on page 91).

Entering patient data (input)

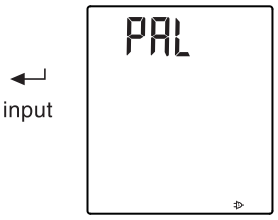
You can enter age, gender and physical activity level (PAL) directly on the multifunctional display as patient data. The patient data are sent with the measured results when you transmit the latter to a wireless printer from the **seca 360° wireless** system.

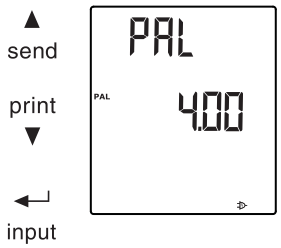
The wireless printer evaluates the measured results on the basis of the patient data. Depending on the configuration of the wireless printer, it will print out measured results and the evaluation. This makes it significantly easier to reach a diagnosis.

NOTE:
For details on how to configure the wireless printer, see the printer's Instructions for Use.

1. Switch on the device (see "Switching on the device" on page 79).
2. Press the Enter key (**input**).
   The first time this menu is called up after the device is started, the menu item "PAL" (physical activity level) appears in the display.
   If you call this menu up again whilst the device is switched on, the last menu item selected will appear in the display.

3. Use the arrow keys **send** or **print** to select a menu item:
   - PAL: physical activity level
   - AGE: age
   - GEn: gender





4. Confirm your selection.
   The value used for the previous measurement will be displayed. You can adopt the value or set a different value using the arrow keys.

Function	Setting
Physical activity level (PAL)	1.0 to 5.0
AGE	• Up to 3 years in months • Up to 18 years in half-years • From 18 years in years
GEn	• Male • Female

5. Confirm your selection.
   You exit the **input** function automatically.
6. If you also want to make settings for "AGE" and "GEn", repeat the process.

Enter patient's gender

Use the **gender** key to enter the patient's gender directly.

NOTE:
This setting overwrites the setting made under "Input\gender".

1. Press the **gender** key to switch between "male" and "female".
2. Press the **clear** key to clear the display of gender symbols.

Determining body mass index (BMI)

Body mass index puts height and weight in a relationship to one another. A tolerance range considered ideal for health is quoted.

1. Switch on the device (see "Switching on the device" on page 79).
2. Ensure that the "BMI" calculation method is set on the multifunctional display (see "Switching between BMI and BFR" on page 88).
3. Ask the patient to step onto the measuring station.
   The patient's height, weight and BMI are announced by voice output (see "Performing the measuring operation" on page 79) and displayed.

4. If weight is to be displayed permanently, press the **hold** key.
   The patient's weight is displayed permanently.

   NOTE:
   When the Autohold function is activated, the weight value is automatically displayed permanently as soon as a stable measured result has been achieved (see "Activating the Autohold (AHOLd) function" on page 91).
5. Ask the patient to step off the measuring station.
6. Read off the measured results. If a seca wireless printer is connected, take the printed ticket.

7. Press the **clear** key.
   Patient data, measured results and BMI will be deleted. This avoids out-of-date data leading to an incorrect BMI for the next patient.

   NOTE:
   If the "Autoclear" function is activated, measured results and BMI will be deleted automatically after 5 minutes (see "Deleting values automatically (ACLr)" on page 88).

Determining body fat rate (BFR)

Body fat rate puts height, weight and gender in a relationship to one another. A tolerance range considered ideal for health is quoted.

NOTE:
If the BFR function is activated, the measured results are not announced by voice output.

1. Ensure that the "BFR" calculation method is set on the multifunctional display (see "Switching between BMI and BFR" on page 88).

2. Press the **gender** key to switch between "male" and "female".
3. Ask the patient to step onto the measuring station.
   The patient's height, weight and BFR are displayed (see "Performing the measuring operation" on page 79).

4. Press the **hold** key.
   The patient's weight is displayed permanently.

   NOTE:
   When the Autohold function is activated, the weight value is automatically displayed permanently as soon as a stable measured result has been achieved (see "Activating the Autohold (AHOLd) function" on page 91).

5. Ask the patient to step off the measuring station.
6. Read off the measured results. If a seca wireless printer is connected, take the printed ticket.

7. Press the **clear** key.
   Patient data, height and BFR will be deleted. This avoids out-of-date data leading to an incorrect BFR for the next patient.

   NOTE:
   If the "Autoclear" function is activated, measured results and BFR will be deleted automatically after 5 minutes (see "Deleting values automatically (ACLr)" on page 88).

Sending measured results to wireless receivers

If the measuring station is integrated in a **seca 360° wireless** network, you can send the measured results to reception-ready devices (e.g. PC with USB wireless adapter) at the touch of a button.

► Press the **send** arrow key.

NOTE:
If automatic transmission (ASEnd) is on, measured results will be sent to the wireless receiver automatically after each measuring operation (see "Activating automatic transmission (ASEnd)" on page 96).

The measured results are sent to reception-ready devices.

Printing measured results

If the measuring station is connected to a seca wireless printer, you can print out the measured results directly.

► Press the **print** arrow key.

NOTE:
If the automatic print function is activated, measured results will be sent to the wireless printer automatically after each measuring operation (see "Selecting print option (APrt)" on page 97). You will then hear the announcement: "Take your printed ticket."

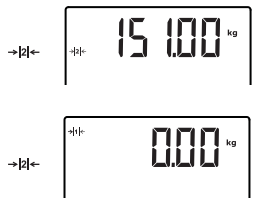
The measured results are printed.

Switching weighing range automatically

The scale has two weighing ranges. In weighing range 1 (→|←), capacity is reduced, but the increments in the weight display are finer. In weighing range 2 (→|←), you can use the maximum capacity of the scale.

After the scale is switched on, weighing range 1 is active. If a particular weight is exceeded, the scale automatically switches to weighing range 2.

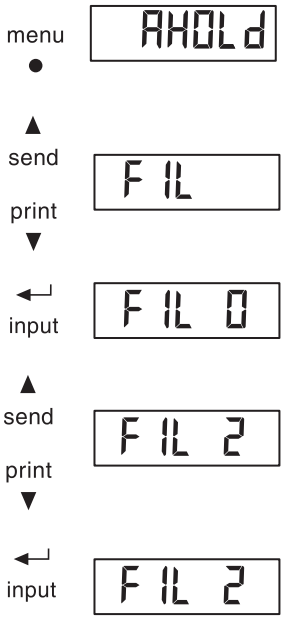
To switch back to weighing range 1, proceed as outlined below.



► Completely remove the load from the scale.
Weighing range 1 is active again.

Switching off the device ► Press the Start key ⏻ of the multifunctional display.

5.3 Navigating in the menu



1. Switch on the device (see "Switching on the device" on page 79).
2. Press the **menu** key.
   The last menu item selected (in this case, Autohold "AHOLd") appears in the display.
3. Press the arrow key **send** or **print** until the desired menu item appears in the display (in this case: filtering "FIL").
4. Confirm your selection by pressing Enter (**input**).
   The current setting for the menu item or a submenu are displayed (in this case: level "0").
5. To change the setting or call up a different submenu, press the arrow key **send** or **print** until the desired setting (in this case: level "2") is displayed.
6. Confirm the setting by pressing Enter (**input**).
   You exit the menu automatically.
7. To make more settings, call up the menu again and repeat the process.

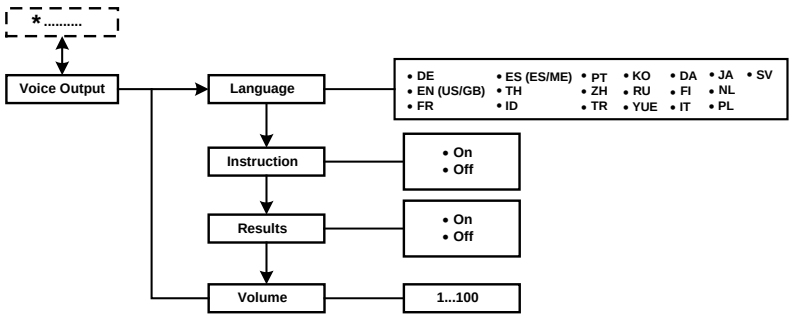
NOTE:

- Briefly press the **menu** key to go back one menu level.
- Press and hold the **menu** key to exit the menu at any time.
- If no key is pressed for about 24 seconds, you exit the menu automatically.

5.4 Configuring voice output (menu)

In the menu you can configure voice output and the beeps if required.

NOTE
The languages available on the device depend on the model in question.



* Information on how to navigate in the multifunctional display menu can be found on page 84.

Selecting language (LAng)

You can select the language for voice output.

1. Select the item "VOICE" from the menu.
2. Confirm your selection.

3. Use the arrow key (**send/print**) to select the menu item "LAng".

4. Confirm your selection.
   The current setting is displayed.
5. Select the desired setting:
6. Confirm your selection.
   You exit the menu automatically.

Setting volume (VOL)

You can adjust the volume of voice output (0 = off, 100 = max.).

1. Select the item "VOICE" from the menu.
2. Confirm your selection.

3. Use the arrow key (**send/print**) to select the menu item "VOL".

4. Confirm your selection.
   The current setting is displayed.
5. To change the setting or call up a different submenu, press the arrow key (**send/print**) until the desired setting (in this case: volume "20") is displayed.
6. Confirm your selection.
   You exit the menu automatically.

Activating/deactivating announcement of measured results (reSUL)

You can set the device so that the measured results (weight, height and BMI) are announced after every measuring operation.

NOTE:
If voice output is in English, the unit of measurement announced will correspond to the setting for the multifunctional display (see "Switching unit of weight (Unit)" on page 92) and to the unit of height (see "Switching unit of height (HUnit)" on page 92).

1. Select the item "VOICE" from the menu.
2. Confirm your selection.

3. Use the arrow key (**send/print**) to select the menu item "reSUL".

4. Select the desired setting:
   - On
   - Off
5. Confirm your selection.
   You exit the menu automatically.

Activating/deactivating the announcement “Take your printed ticket” (Print)

If you have connected a seca wireless printer to the device, you can set the device so that following the measurement, there is an announcement telling you to take the printed ticket with the results.

1. Select the item "VOICE" from the menu.
2. Confirm your selection.

3. Use the arrow key (**send/print**) to select the menu item "Print".

4. Select the desired setting:
   - On
   - Off
5. Confirm your selection.
   You exit the menu automatically.

Activating/deactivating announcement of patient instructions (InStr)

You can set the device so that patient instructions are announced for every measuring operation.

NOTE:
Select a language the patient understands (see "Selecting language (LAng)" on page 85).

1. Select the item "VOICE" from the menu.
2. Confirm your selection.

3. Use the arrow key (**send/print**) to select the menu item "InStr".

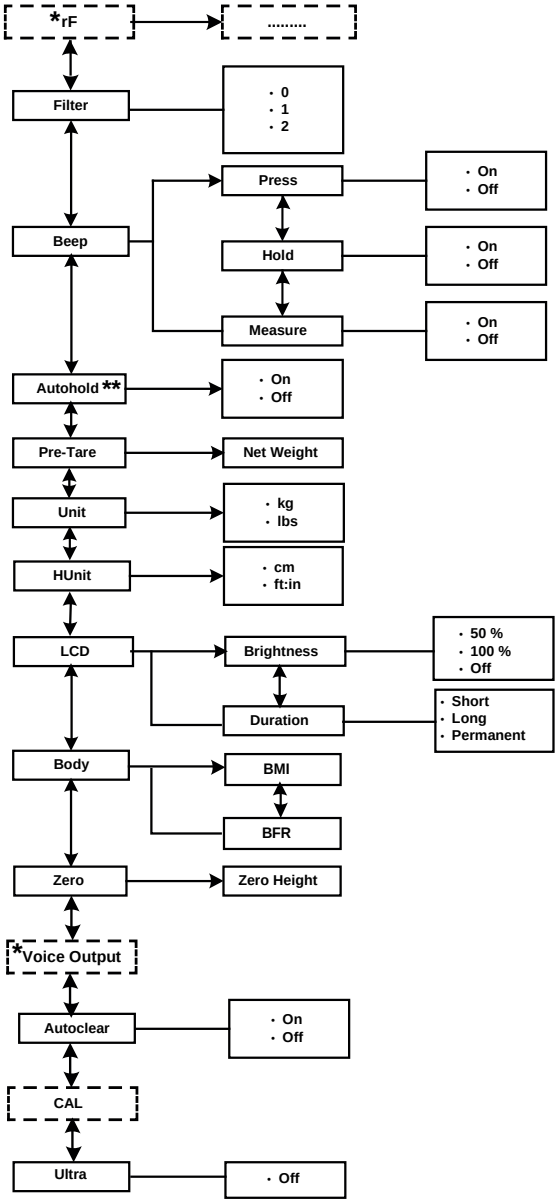
4. Select the desired setting:
   - On
   - Off
5. Confirm your selection.
   You exit the menu automatically.

Configuring beeps

► Configure the beeps as described in the section entitled "Activating/deactivating beeps (bEEP)" on page 91.

5.5 Other functions (menu)

Other functions are available to you in the device menu. This enables you to configure the device perfectly to suit your needs.



* The description of menu item "rF" can be found in the section entitled "Operating the measuring station in a wireless group (menu)" from page 95. The description of menu item "Voice Output" can be found in the section entitled "Configuring voice output (menu)" on page 85.

NOTE:
A description of how to navigate the menu can be found in the section entitled "Navigating in the menu" on page 84.

Deleting values automatically (ACLr)

Out-of-date measured results and patient data lead to incorrect calculation of BMI or BFR. You can set the device so that the measured results and patient data below are automatically deleted after 5 minutes:

- gender
- physical activity level (PAL)
- age
- height
- BMI
- BFR

NOTE:

- If you want to enter PAL, age and gender (**input** function) for the next measurement, the values of the previous measurement will be suggested again (see "Entering patient data (input)" on page 81).
- This function is activated at the factory on some models. You can deactivate the function if desired.

1. Select the item "ACLr" from the menu.
2. Confirm your selection.
   The current setting is displayed.
3. Select the desired setting:
   – On
   – Off
4. Confirm your selection.
   You exit the menu automatically.
   Patient data, height and BMI/BFR will in each case be deleted 5 minutes after a measurement. "----" will be displayed instead.
   The gender symbol will go out.

Deactivating ultrasound measurement

You can deactivate height measurement if you just want to use the weighing function.

NOTE:
If you deactivate ultrasound measurement, this will be reactivated automatically when you restart the device.

1. Select the item "ULtrA" from the menu.
2. Confirm your selection.
3. Select the desired setting:
   – Off
4. Confirm your selection.
   You exit the menu automatically.

Switching between BMI and BFR

You can select whether the measuring station calculates body mass index (BMI) or body fat rate (BFR). The current setting is displayed permanently in the multifunctional display.

The calculation is performed automatically as soon as the measuring station has determined the patient's weight and height.

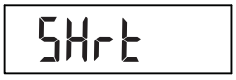
NOTE:
If the BFR function is activated, the measured results are not announced by voice output.

1. Select the item "bodY" from the menu.

2. Confirm your selection.
   The current setting is displayed.
3. Press the arrow key **send** or **print** to switch between BMI and BFR.
4. Confirm your selection.
   You exit the menu automatically.
   The amended setting is displayed permanently in the multifunctional display.

Setting display backlighting (LCD)

You can change the duration and brightness of display backlighting.



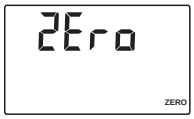
1. Select the item "LCD" from the menu.
2. Confirm your selection.
3. Select a menu item (in this case: dUr).
   - dUr: duration
   - brL: brightness
4. Confirm your selection.
   The current setting is displayed.
5. Select the desired setting:

Function	Setting
Duration	• Short (approx. 15 sec.) • Long (approx. 150 sec.) • Perm (permanent)
Brightness	• 50 % • 100 % • Off

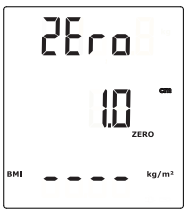
6. Confirm your selection.
   You exit the menu automatically.
7. If you also want to make settings for the second function, repeat the process.

Permanently saving additional height (ZEro)

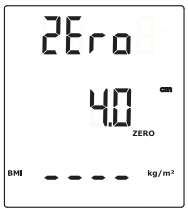
Using the zero function (ZEro), you can permanently save an additional height and have it deducted from a measured result automatically. For example, you can save a standard height for shoe heels and have it deducted from the measured result whenever a patient is measured fully-clothed.



1. Select the item "ZEro" from the menu.

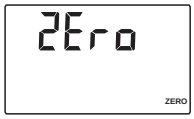


   The last set additional height flashes in the display.
   "ZEro" appears in the display.
2. You can adopt the saved value or set a different value using the arrow keys.
3. Confirm your selection.



The set additional height (in this case: 4 cm) is displayed.

4. Ask the patient to step onto the scale.
   The patient's height is displayed.
   The saved additional height has been deducted automatically.
5. To deactivate the function, select the item "ZEro" from the menu again.



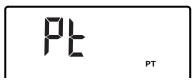
6. Confirm your selection.
   The set additional height is no longer displayed.
   The function is deactivated.

NOTE:
If for documentation purposes, you transmit results of relative measurements to devices which calculate BMI or BFR automatically, plausible values will not result for these two parameters.

Permanently saving additional weight (Pt)

Using the Pre-tare function (Pt), you can permanently save an additional weight and have it deducted from a measured result automatically. For example, you can save a standard weight for shoes and clothing and then have it deducted from the measured result whenever a patient is weighed fully-clothed.

1. Select the item "Pt" from the menu.

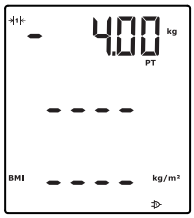


The last set additional weight flashes in the display.
"Pt" appears in the display.

2. You can adopt the saved value or set a different value using the arrow keys.

NOTE:
When you enter the value "0", the function is switched off. The message “Pt” is no longer displayed.

3. Confirm your selection.
   The set additional weight (in this case: 4 kg) is displayed with a minus sign in front.



The messages "NET" and "Pt" are displayed.

4. Ask the patient to step onto the scale.
   The patient's weight is displayed.
   The saved additional weight has been deducted automatically.
5. To deactivate the function, select the item "Pt" from the menu again.

6. Confirm your selection.
   The set additional weight is no longer displayed.
   The function is deactivated.

Activating the Autohold (AHOLd) function

When you activate the Autohold function, the measured result for every measuring operation continues to be displayed after the load has been removed from the scale. It is then no longer necessary to activate the Hold function manually for each individual measuring operation.

NOTE:
Regardless of the setting selected here, the weight of the child is always determined by Autohold in the **2 in 1** function.

1. Select the item "AHOLd" from the menu.
2. Confirm your selection.
   The current setting is displayed.

3. Select the desired setting:
   – On
   – Off
4. Confirm your selection.
   You exit the menu automatically.

Activating/deactivating beeps (bEEP)

You can set the following beeps:

- when a key is pressed
- when a stable weight value is reached
- at the start and end of a measuring operation

The beep when a stable weight value is reached is important for the hold/ Autohold function.

1. Select the item "bEEP" from the menu.
2. Confirm your selection.
3. Select a menu item.

   – PrESS: beep when key is pressed

   – HOLd: beep when weight value is stable

   – MEASr: beeps during the measuring operation
4. Confirm your selection.
   The current setting is displayed.

5. Select the desired setting:
   – On
   – Off
6. Confirm your selection.
   You exit the menu automatically.
7. If you also want to activate beeps for the second function, repeat the process.

Setting filtering (FIL)

Filtering (FIL) allows you to reduce interference when determining weight. The selected setting affects the sensitivity with which the weight display reacts to patient movements and the time until the "HOLd" function displays a weight value permanently.

1. Select the item "FIL" from the menu.

2. Confirm your selection.
   The current setting is displayed.

3. Select a filtering level.

FIL	Weight display	Hold
0	Sensitive	Slow
1	Medium	Medium
2	Slow	Fast

NOTE:

- If "0" is set, then if you are weighing patients who are not very steady on their feet, it is possible that despite the"Hold" function being activated, no weight value will be permanently displayed.
- The greatest deviation between the weight value displayed and the actual value occurs with setting "2".

4. Confirm your selection.
   You exit the menu automatically.

Switching unit of weight (Unit)

On non-verified scales, you can select the unit (Unit) in which you want weight to be displayed.

CAUTION!
Hazard to patient
To prevent misinterpretations, measured results for medical purposes may only be displayed and used in SI units (weight: kilograms, height: meters). Some devices have the option of displaying measured results in different units. This is purely an additional function.

► Only use measured results in SI units.

► The user takes sole responsibility for the use of measured results in non-SI units.

1. Select the item "Unit" from the menu.
2. Confirm your selection.
   The current setting is displayed.

3. Select the unit in which you want weight to be displayed:
   – kilograms (kg)
   – pounds (lbs)
4. Confirm your selection.
   You exit the menu automatically.

Switching unit of height (HUnit)

You can select the unit (HUnit) in which you want height to be displayed.

CAUTION!
Hazard to patient
To prevent misinterpretations, measured results for medical purposes may only be displayed and used in SI units (weight: kilograms, height: meters). Some devices have the option of displaying measured results in different units. This is purely an additional function.

► Only use measured results in SI units.

► The user takes sole responsibility for the use of measured results in non-SI units.

1. Select the item "HUnit" from the menu.
2. Confirm your selection.
   The current setting is displayed.

3. Select the unit in which you want height to be displayed:
   – centimeters (cm)
   – feet and inches (ft:in)
4. Confirm your selection.
   You exit the menu automatically.

Restoring factory settings (rESEt)

You can restore the factory settings for the functions below.

Function	Factory setting
Autohold (AHOLd")	On
Beep (PrESS)	On
Beep (HOLd)	On
Beep (MEASr)	On
Filtering (FIL)	0
Autoclear (ACLr)	On
Pre-tare (Pt)	0 kg
Display backlighting brightness	50 %
Display backlighting duration	Permanent
BMI/BFR	BMI
Physical activity level (PAL)	1.0
Age in years	18
Age in months	0
Unit for height	cm
Wireless module (SYS)	Off
Autosend (ASEnd)	Off
Autoprint (APrt)	Off
Beeps for measurement	On
Language	Variant-dependent
Patient instructions	On
Announcement of measured results	Variant-dependent
Volume	50 %
Announcement “Take your printed ticket" (Print)	Off
Ultra	Active

NOTE:
The wireless module is switched off when factory settings are restored. Information about existing wireless groups is retained. Wireless groups do not have to be set up again.

1. Select the item "rESEt" from the menu.
2. Confirm your selection.
   You exit the menu automatically.
3. Switch off the scale.
   Factory settings are restored and are available when the scale is switched back on.

6. THE SECA 360° WIRELESS NETWORK

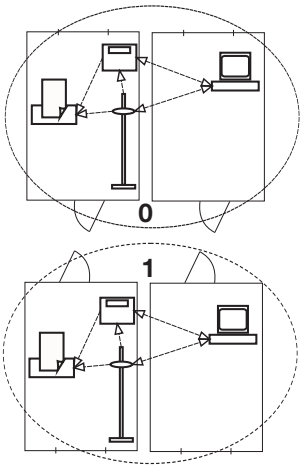
6.1 Introduction

The device is equipped with a wireless module. The wireless module enables wireless transmission of measured results for evaluation and documentation. Data can be transmitted to the following devices:

- seca wireless printer
- PC with seca USB wireless adapter

seca wireless groups

The **seca 360° wireless** network works with wireless groups. A wireless group is a virtual group of transmitters and receivers. If several transmitters and receivers of the same type are going to be operated, up to 3 wireless groups (0, 1, 2) can be set up.



Setting up several wireless groups ensures reliable, correctly-addressed transmission of measured values if you wish to use several examination rooms each with comparable equipment.

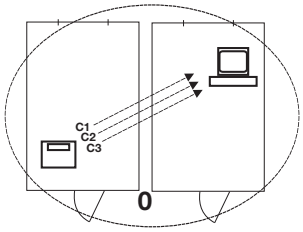
The maximum distance between transmitters and receivers is approx. 10 meters. Certain local circumstances, such as the thickness and type of walls, may reduce the range.

The following combination of devices is possible for each wireless group:

- 1 baby scale
- 1 personal scale
- 1 length measuring device
- 1 seca wireless printer
- 1 PC with seca USB wireless adapter

Channels

Within a wireless group, devices communicate with each other on three channels (C1, C2, C3).



If you set up a wireless group with this device, the device will suggest three channels which will guarantee optimal data transmission. We recommend adopting the channel numbers suggested.

You can also manually select the channel numbers (0 to 99), for example if you wish to set up several wireless groups.

To ensure interference-free data transmission, the channels must be spaced sufficiently far apart. We recommend a spacing between channel numbers of at least 30. Each channel number may only be used for one channel.

Example of configuration; channel numbers when setting up 3 wireless groups within a medical practice:

- Wireless group 0: C1=_0, C2=30, C3=60
- Wireless group 1: C1=10, C2=40, C3=70
- Wireless group 2: C1=20, C2=50, C3=60

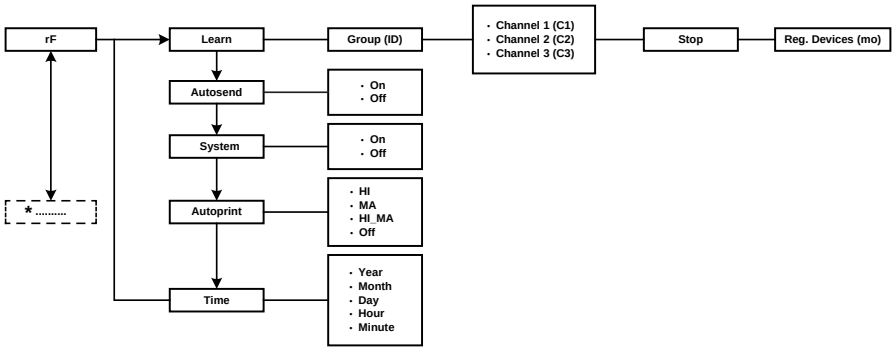
Device registration

If you set up a wireless group with this device, it searches for other active devices from the **seca 360° wireless** system. The registered devices are shown in the display of the device in the form of modules (e.g. Mo 3) by means of numbers. The numbers have the following meaning:

- 1: personal scale
- 2: length measuring device
- 3: wireless printer
- 4: PC with seca USB wireless adapter
- 7: baby scale
- 5, 6 and 8-12: reserved for system expansion

6.2 Operating the measuring station in a wireless group (menu)

All the functions you need to operate the device in a seca wireless group can be found in the "rF" submenu.



* Information on how to navigate in the multifunctional display menu can be found on page 84.

Setting up a wireless group (Lrn)

To set up a wireless group, follow the instructions below.

1. Switch on the device.
2. Call up the menu.
3. Select the item "rF" from the menu.
4. Confirm your selection.

5. Select the "Lrn" (learn) menu item.
6. Confirm your selection.

The wireless group currently set (in this case: wireless group 0 "Id 0") is displayed.

If the wireless group "0" already exists and you want to set up another wireless group with this device, select a different ID using the arrow keys (here: wireless group 1 "Id 1").

7. Confirm your selection of wireless group.

The device suggests a channel number for Channel 1 (in this case: "C1 0").
You can adopt the proposed channel number or use the arrow keys to set a different channel number.

8. Confirm your selection for Channel 1.

The device suggests a channel number for Channel 2 (in this case: "C230").
You can adopt the proposed channel number or use the arrow keys to set a different channel number.

NOTE:
Double-digit channel numbers are displayed without a space. The display "C230" therefore means: channel "2", channel number "30".

9. Confirm your selection for Channel 2.

The device suggests a channel number for Channel 3 (in this case: "C360").
You can adopt the proposed channel number or use the arrow keys to set a different channel number.

10. Confirm your selection for Channel 3.

The message **StOP** appears in the display.
The device waits for signals from other wireless-capable devices in range.

NOTE:
On some devices, a special switch-on procedure has to be followed if they are going to be integrated in a wireless group. Follow the Instructions for Use for the device in question.

11. Switch on the device, e.g. a wireless printer, you want to integrate in the wireless group.
When the wireless printer is registered, you will hear a beep.

NOTE:
As soon as you have integrated a wireless printer in the wireless group, you then have to select a print option (Menu\rF\APrt) and set the time (Menu\rF\tIME).

12. Repeat step 11. for all the devices you want to integrate in this wireless group.
13. Press the Enter key to stop the search process.
14. Press an arrow key to have displayed the devices which have been registered (in this case: "Mo 3" for a wireless printer).

If you have integrated several devices in the wireless group, press the arrow key several times to ensure that all devices have been registered by the scale.

15. Exit the menu using the Enter key or wait until you exit the menu automatically.

Activating automatic transmission (ASEnd)

You can configure the device so that measured results are automatically sent to all reception-ready receivers and are registered to the same wireless group (e.g.: wireless printer, PC with USB wireless adapter).

NOTE:
If you are using a wireless printer, ensure that "Off" is not set as the print option (see "Selecting print option (APrt)" on page 97).

1. Switch on the device.
2. Select the "ASEnd" menu item from the "rF" submenu and confirm your selection.

3. Select the "On" setting and confirm your selection.
You exit the menu automatically.

Activating/deactivating the wireless module (system)

The device is supplied with an activated wireless module. An activated wireless module increases power consumption. You can deactivate the wireless module if you do not want to use the wireless data transmission option.

1. Switch on the device.
2. Select the "SYS" menu item from the "rF" submenu.
3. Confirm your selection.
The current setting is displayed

4. Select the desired setting:
   - On
   - Off
5. Confirm your selection.
   You exit the menu automatically.

Selecting print option (APrt)

You can configure the measuring station so that the measured results are automatically printed out on a wireless printer registered to the wireless group.

NOTE:
This function is only accessible if a seca wireless printer has been integrated in the wireless group via the "Learn" function.

1. Switch on the multifunctional display.

2. Select the "APrt' menu item from the "rF" submenu and confirm your selection.
3. Depending on the print result you want, select the relevant setting for the multifunctional display:

APrt multifunctional display	Print result
Weight	MA
Height	HI
Height, weight and BMI/BFR	HI_MA
Automatic printing deactivated	Off

4. Confirm your selection.
   You exit the menu automatically.

NOTE:
If the device APrt function and voice output are activated, the announcement "Take your printed ticket" is made as soon as the measured results are printed.

Setting time (tIME)

You can configure the system so that the wireless printer automatically adds a date and time to your measured results. To do this, you have to set date and time once on this device and transmit it to the internal clock of the wireless printer.

NOTE:
This function is only accessible if a seca wireless printer has been integrated in the wireless group via the "Learn" function.

1. Switch on the device.

2. Select the "tIME" menu item from the "rF" submenu.
3. Confirm your selection.
   The current setting for "Year" (**YEA**) is displayed.

4. Set the correct year.
5. Confirm your selection.
6. Repeat steps 4. and 5. accordingly for "Month" (**Mon**), "Day" (**dAY**), "Hour" (**hour**) and "Minute" (**Min**).
7. Confirm each of your selections.
   After confirming the setting for "minute", you automatically exit the menu.
   The settings are automatically transmitted to the wireless printer.
   The wireless printer automatically adds a date and time to every printout.

NOTE:
Follow the Instructions for Use for the wireless printer for further information about operating it.

7. HYGIENE TREATMENT

WARNING!
Electric shock
The device is not de-energized when the on/off key is pressed and the display goes out. Use of fluids on the device may cause electric shock.

- ► Ensure that the device is switched off before performing any hygiene treatment.
- ► Disconnect the power supply connector before performing any hygiene treatment.
- ► Before each hygiene treatment, take the rechargeable battery out of the device (if present and removable).
- ► Ensure that no fluids penetrate the device.

CAUTION!
Damage to device
Inappropriate detergents and disinfectants may damage the sensitive surfaces of the device.

- ► Use only chlorine and alcohol-free disinfectants which are explicitly suitable for acrylic sheet and other sensitive surfaces (active ingredient: quaternary ammonium compounds, for example).
- ► Do not use aggressive or abrasive cleaning agents.
- ► Do not use organic solvents (e.g. white spirit or petroleum spirit).
- ► Ensure that no moisture or dust get into the sensors during cleaning.

7.1 Cleaning

- ► Use a soft cloth dampened with mild soapsuds to clean the surfaces of the device.

7.2 Disinfecting

1. Check that your disinfectant is suitable for sensitive surfaces and acrylic sheet.
2. Follow the instructions on the disinfectant.
3. Disinfect the device:
   - ► Moisten a soft cloth with disinfectant and wipe down the device with it.
   - ► Comply with the intervals, see table.

Interval	Component
Before every measurement	Weighing platform
After every measurement	Weighing platform
If required	• Column and multifunctional display • Ultrasound head • Column elements

7.3 Sterilizing

This device may not be sterilised.

8. FUNCTION CHECK

► Perform a function check prior to each use.

A complete function check includes:

- visual inspection for mechanical damage
- checking the alignment of the device
- visual and function check of the display elements
- function check of all the controls shown in the section entitled “Overview”
- function check of optional accessories

If you notice any faults or deviations during the function check, first try to resolve the error with the aid of the section entitled “What do I do if ...” in this document.

CAUTION!
Personal injury
If you notice any faults or deviations during the function check which cannot be resolved with the aid of the section entitled “What do I do if ...” in this document, you may not use the device.

► Have the device repaired by seca service or by an authorized service partner.

► Follow the section entitled “Servicing” in this document.

9. WHAT DO I DO IF...?

Problem	Cause/solution
... the message "FAIL" appears during calibration?	Calibration has failed. - Check whether you have used the reference measuring device supplied - Check whether you placed the reference measuring device centrally on the feet of the lower part of the device (see "Calibrating height measurement" on page 78) - Check whether any objects or people are in the immediate vicinity of the device during calibration (see "Setting up the device" on page 74)
... no weight is displayed with a load on the scale.	The device has no power supply. - Check whether the scale is switched on - Check whether batteries are inserted (devices with battery operation) - Check whether there is a power supply (devices operated by the electricity supply)
... the status LED does not come on?	• The modular cable in the ultrasound measuring head has not been plugged in properly - Check whether the modular cable in the ultrasound measuring head is correctly plugged in • Ultrasound measurement is deactivated - Restart the device • The status LED is faulty - Inform seca Service
... no patient instructions are announced?	• Announcement of patient instructions is not activated - Activate function (see "Activating/deactivating announcement of patient instructions (InStr)" on page 86) • Ultrasound measurement is deactivated - Restart the device • Volume set to zero - Increase volume • Loudspeaker is faulty - Inform seca Service

Problem	Cause/solution
... no beeps can be heard?	• Beeps are not activated - Activate function (see "Activating/deactivating beeps (bEEP)" on page 91) • Ultrasound measurement is deactivated - Restart the device • Volume set to zero - Increase volume • Loudspeaker is faulty - Inform seca Service
... the measured results are not announced?	• Announcement of measured results is not activated - Activate function (see "Activating/deactivating announcement of measured results (reSUL)" on page 86) • Ultrasound measurement is deactivated - Restart the device • Volume set to zero - Increase volume • Loudspeaker is faulty - Inform seca Service
... the request to take the printed ticket is not announced?	• The function is not activated - Activate function (see "Activating/deactivating the announcement “Take your printed ticket” (Print)" on page 86) • Ultrasound measurement is deactivated - Restart the device • Volume set to zero - Increase volume • Loudspeaker is faulty - Inform seca Service
... one segment of the multifunctional display is on either continuously or not at all?	The corresponding point has a fault. - Inform seca Service
… the display "StOP" appears?	• During weighing: Maximum load has been exceeded. - Remove the load from the scale • When setting up a wireless group: Wireless channel setup is complete. - Switch on devices to be integrated in the wireless group (see "Setting up a wireless group (Lrn)" on page 95)
The display "tEMP" appears.	The ambient temperature of the scale is too high or too low. - Set up the scale in an ambient temperature between +10 °C and +40 °C - Wait for around 15 minutes until the scale has adapted to the ambient temperature.
... the multifunctional display is no longer reacting to keys being pressed?	• Key lock is active. - Switch off key lock (see "Activating/deactivating key lock" on page 80) • Device is in an undefined state following implausible input. - Take power supply unit out of the socket - Wait approx. 1 minute - Plug the power supply unit into the socket; the scale and the multifunctional display will switch on automatically

Problem	Cause/solution
... after switching on for the first time, measured results are transmitted and two beeps are heard?	• The device was unable to send measured results to the wireless receiver (seca wireless printer or PC with seca USB wireless adapter). - Check whether the device is integrated in the wireless network - Check whether the receiver is switched on • Reception is being interfered with by HF equipment (e.g. cell phones) in the vicinity. - Keep HF equipment at least 1 meter away from transmitters and receivers in the seca wireless network. **NOTE:** If this fault is not eliminated, there will be **no** fresh acoustic warning when further attempts are made to send data.
... only the "SYS" item is visible in the "rF" menu?	The wireless module is deactivated. - Activate wireless module (see "Activating/deactivating the wireless module (system)" on page 96)
... only the "SYS" and "Lrn" items are visible in the "rF" menu?	The wireless module is activated and no wireless group is set up. - Set up wireless group (see "Setting up a wireless group (Lrn)" on page 95)
... the items "APrt" and "tIME" are not visible in the "rF" menu?	No wireless printer registered to the wireless group. - Register the wireless printer to the wireless group via the "Lrn" menu item (see "Setting up a wireless group (Lrn)" on page 95)
... after calling up the menu, the "rF" item is not displayed?	The scale's wireless module is defective. - Inform seca Service
… the display "Er :H :11:" appears?	The scale has too high a load or too high a load in one corner. - Remove the load from the scale or distribute the load more evenly - Restart the scale.
… the display "Er :H :12:" appears?	The scale has been switched on with too high a load. - Remove the load from the scale - Restart the scale.
… the display "Er :H :16:" appears?	The scale was caused to oscillate, the zero point could not be determined. - Restart the scale.
… the Enter key is pressed and the display "Er :H :71:" appears?	No data transmission possible, wireless module deactivated. - Activate wireless module (see "Activating/deactivating the wireless module (system)" on page 96)
… the Enter key is pressed and the display "Er :H :72" appears?	No data transmission possible, no wireless group set up. - Set up wireless group (see "Setting up a wireless group (Lrn)" on page 95)
... the display "Er :6 :80" appears?	Voice output memory cannot be read. - Inform seca Service You can continue operating the measuring station. Deactivate the beeps and voice output to suppress the error message: - deactivate announcement of patient instructions (see "Activating/ deactivating announcement of patient instructions (InStr)" on page 86) - deactivate announcement of measured results (see "Activating/ deactivating announcement of measured results (reSUL)" on page 86) - deactivate beeps (see "Activating/deactivating beeps (bEEP)" on page 91)
... the display "Er :6 :81" appears?	Voice file not found. - Inform seca Service You can continue operating the measuring station. Deactivate the beeps and voice output to suppress the error message: - deactivate announcement of patient instructions (see "Activating/ deactivating announcement of patient instructions (InStr)" on page 86) - deactivate announcement of measured results (see "Activating/ deactivating announcement of measured results (reSUL)" on page 86) - deactivate beeps (see "Activating/deactivating beeps (bEEP)" on page 91)

Problem	Cause/solution
... the display "Er :6 :82" appears?	An error occurred during the measuring operation. - Ask the patient to keep still and repeat the measuring operation • If the error message recurs: - inform seca Service
... the display "Er :6 :83" appears?	An error occurred during the reference measurement. - Step off the platform • Interference caused by reflection - Remove objects from the immediate vicinity of the device (see "Setting up the device" on page 74). - Ask people to keep a reasonable distance from the device (see "Setting up the device" on page 74). • Interference cause by other ultrasonic emitters - Increase the distance from other ultrasonic emitters (see "Setting up the device" on page 74)
... the display "Er :6 :84" appears?	• The ambient temperature of the device is too high or too low. - Set up the device in an ambient temperature between +10 °C and +40 °C - Wait for around 15 minutes until the device has adapted to the ambient temperature • The temperature sensor is faulty. - Inform seca Service

10. MAINTENANCE

The product must be set up carefully and serviced regularly. Depending on how frequently the product is used, we recommended servicing at intervals of 3 to 5 years.

NOTICE!

Incorrect measurements as a result of poor servicing

► Have servicing and repairs carried out exclusively by seca service or by an authorized service partner.

► You can find service partners in your area at www.seca.com or by sending an e-mail to service@seca.com.

11. TECHNICAL DATA

11.1 General technical data

General technical data	
Dimensions • Depth • Width • Height	 466 mm 434 mm 2270 mm
Net weight	16.5 kg
Ambient conditions, operation • Temperature • Air pressure • Humidity	 +10° C to +40° C (50 °F to 104 °F) 700 hPa - 1060 hPa 30 % to 80 %, no condensation
Ambient conditions, storage • Temperature • Air pressure • Humidity	 -10° C to +65° C (14 °F to 149 °F) 700 hPa - 1060 hPa 0 % to 95 %, no condensation

General technical data	
Ambient conditions, transport • Temperature • Air pressure • Humidity	 -10° C to +65° C (14 °F to 149 °F) 700 hPa - 1060 hPa 0 % to 95 %, no condensation
Height of digits • Multifunctional display, three-line	 14 mm
Power supply • Power supply unit - Supply voltage - Maximum current consumption	 12 V typically 500 mA
Mains voltage	100 V - 240 V
Mains frequency	50 Hz - 60 Hz
Current consumption for multifunctional display/ultrasound head - with wireless module deactivated, no backlighting and 50 % volume - with wireless module activated, permanent backlighting (brightness: 100 %) and 75 % volume	 Approx. 100 mA Approx. 220 mA
Metrology data, height measurement • Measuring range • Graduations	 60 cm - 210 cm (1 ft: 11 5/8 inch - 6 ft: 10 5/8 inch) 1 mm (1/8 inch)
Accuracy • 100 to 200 cm (at 20° C ambient temperature, no air movement, no interfering objects in the environment of the measuring range)	 ± 5 mm (± 0.2 inch) (at 3 ft: 3 3/8 inch and 6 ft: 6 6/8 inch)
EN 60601-1: • insulated device, protection class II • medical electrical device, type B	
Type of protection	IP 20
Operating mode	Continuous duty
Medical device in accordance with Directive 93/42/EEC	Class I with measuring function
Medical device in accordance with Canadian Medical Devices Regulations SOR/98-282	Class II
Wireless transmission • Frequency band • Transmission power • Standards applied	 2.433 GHz - 2.480 GHz < 10 mW EN 300 328 EN 301 489-1: EN 301 489-17:
Minimum weight (to trigger measuring operation)	0.5 kg

11.2 Weighing data

seca 286	
Maximum load	300 kg
Minimum load	1 kg
Increments	50 g
Tare range	up to 300 kg
Accuracy: • 0 to 33 kg = 72.75 lbs • 33 kg to 300 kg: • 0 lbs to 72.75 lbs • 72.75 lbs to 661.36 lbs	 ± 50 g = 1.76 oz ± 0.15 % ± 1.76 oz ± 0.15 %

12. SPARE PARTS

seca analytics 101 PC software	101-00-00-010
Switched-mode power supply unit: 100-240 V~ / 50-60 Hz / 12 V= / 0.5 A	68-32-10-270

13. OPTIONAL ACCESSORIES

seca analytics 115 PC software	Application-specific license models
seca 360° wireless network: • Wireless printers - **seca 360° Wireless Printer 465** - **seca 360° Wireless Printer Advanced 466** • USB wireless adapter - **seca 360° Wireless USB adapter 456** - **seca 360° Wireless USB adapter 456 WA** (for Welch Allyn patient monitors)	 Country-specific versions Country-specific versions 456-00-00-009 456-00-00-749
Bracket for **seca 360° Wireless Printer 465**: - **seca 481** Bracket for **seca 360° Wireless Printer Advanced 466**: - **seca 482**	 481-00-00-009 482-00-00-009

14. DISPOSAL

Do not dispose of the device with household waste. The device must be disposed of properly as electronic waste. Comply with the national provisions applicable in your country. For further information contact our service department at:

service@seca.com

15. WARRANTY

We offer a two-year warranty from the date of delivery for defects attributable to faulty material or poor workmanship. This excludes all moveable parts such as (rechargeable) batteries, cables, power supply units, etc. Defects which are covered by the warranty shall be rectified free of charge for customers on production of the sales receipt. No further claims can be accepted. The costs of shipment in both directions shall be borne by the customer where the device is not located at the customer's premises. In the event of any damage during shipment warranty claims can only be asserted where the complete original packaging was used for shipment and the scales were secured inside in the same manner as in the original packaging. You should therefore keep all packaging.

The warranty shall become null and void where the device is opened by persons not expressly authorised to do so by seca.

In the event of a warranty issue, please contact your local seca office or the dealer from whom you ordered the product.

16. DECLARATION OF CONFORMITY

CE 0123

seca gmbh & co. kg hereby declares that the product meets the terms of the applicable European directives. The unabridged declaration of conformity can be found at: www.seca.com.

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