

seca 655/654

seca 455

seca 257/254

seca 453

Instructions for Use

17-10-07-705-002_2026-07S

Firmware version: 2.1

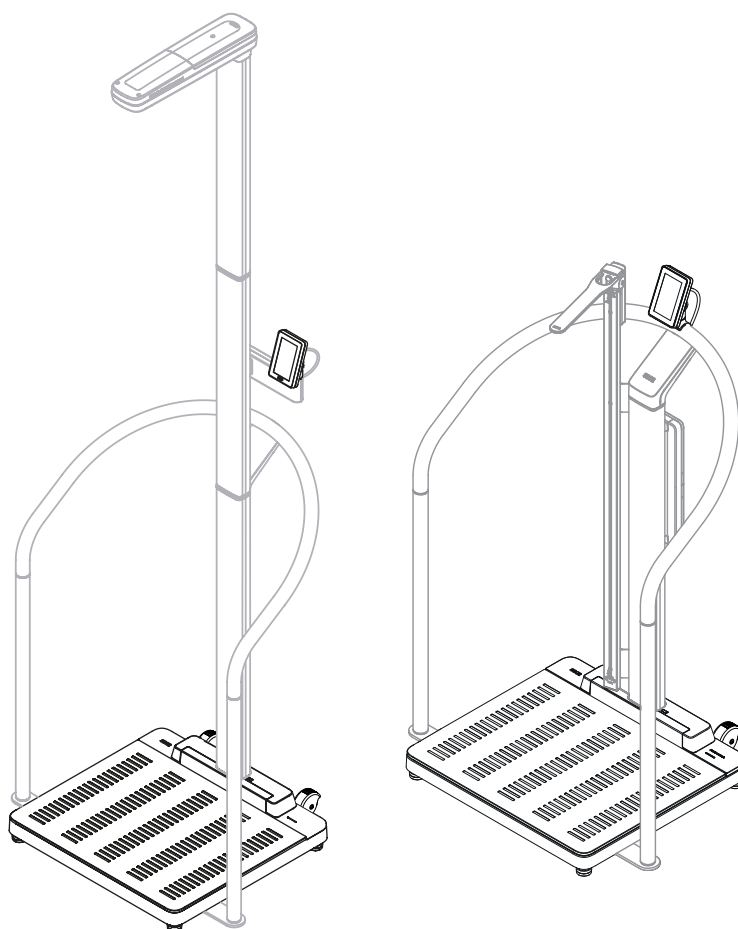


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1 ABOUT THIS DOCUMENT

These instructions for use contain information about the operation of **seca 655/654** scales and compatible seca products.

The installation of compatible seca products is not part of these instructions for use. An overview of compatible seca products is available here: → [Compatible seca products, page 87](#).

1.1 Representation in text

Symbol	Description
✓	Requirement for actions
►	Action
1. 2.	Actions with specified sequence
a) b)	Steps of an action with specified sequence
⇒	Result of an action
• •	First level of a list
— —	Second level of a list

1.2 Representation in diagrams

Symbol	Description
	Indicates relevant points on the device or on device components
	Indicates directions of movement of the device or of device components
	Correct action Correct result of action
	Incorrect action Incorrect result of action
	Points to the next step of a procedure
	Points to an element the user is clicking
	End of a procedure, e.g. the installation of a part

1.3 PDF version

The device menu contains a QR code which can be used to access the PDF version of these instructions for use and to load them e.g. onto your smartphone or tablet PC.

Further information is available here: → [Using the PDF version of the instructions for use \(QR code\), page 55](#)

2 DESCRIPTION OF DEVICE

2.1 Intended use

- | | |
|---------------------|--|
| seca 655/654 | The electronic flat scale supports physicians in decision-making regarding diagnosis or therapy based on weight. The flat scale can be combined with optional accessories and devices to enable the measurement of height. |
| seca 455 | The handrail supports persons who cannot stand independently for a longer period of time while being weighed on a compatible scale. |
| seca 257 | The ultrasonic measuring rod supports physicians in decision-making regarding diagnosis or therapy based on height. |
| seca 254 | The digital measuring rod supports physicians in making diagnoses or deciding on a course of treatment based on height. |

2.2 Clinical benefit

- | | |
|---------------------|---|
| seca 655/654 | The electronic flat scale supports physicians in decision-making regarding diagnosis or therapy based on parameters measured and calculated (indirect clinical benefit). |
| seca 455 | The handrail supports the intended purpose of compatible scales (indirect clinical benefit). |
| seca 257/254 | In conjunction with compatible scales, the measuring rod supports physicians in decision-making regarding diagnosis or therapy based on parameters measured and calculated (indirect clinical benefit). |

2.3 Contraindications

No contraindications are known.

2.4 Patient target group

- | | |
|---------------------|--|
| seca 655/654 | The scale is intended for Persons of all ages who do not exceed the maximum capacity of the scale and who can stand independently on the scale – if available – with support of a handrail. |
| seca 455 | The handrail is intended for persons of all ages (with the exception of babies), who can not stand independently for a longer period of time. |
| seca 257/254 | The measuring rod is intended for Persons of all ages (with the exception of babies), whose height lies within its measuring range. Persons must be able to stand independently – if necessary with the help of a handrail – while being measured. |

2.5 User qualification

Assembly	Devices shipped partly assembled may only be assembled by sufficiently qualified persons (such as specialist dealers, hospital technicians or seca Service technicians).
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 persons with formal training in the healthcare sector or in medicine.

2.6 Functional description

Measuring weight/entering height	Weight calculation is performed by four load cells. The measured results are shown on the multifunctional display. Height is entered manually. Body Mass Index (BMI) or Body Surface Area (BSA) are calculated automatically as soon as a height is entered.
Measuring weight and height	Weight and height can be recorded simultaneously if a compatible measuring rod is fitted to the scale. Body Mass Index (BMI) or Body Surface Area (BSA) are calculated automatically. The seca 257 measuring rod records height by means of ultrasound. The patient is guided through the measurement using configurable voice output. The seca 254 digital telescopic measuring rod records the height of individuals ≥ 1.22 m by scanning a digital scale. For individuals < 1.22 m, height must be read off the measuring rod and entered manually on the multifunctional display of the scale.
Mobile measuring	Using the seca 453 battery pack available as an option, you can use the device on a mobile basis (not recommended for device combinations involving the ultrasonic measuring rod). With rechargeable battery operation, measured results can only be transmitted to patient files manually. Network functions (e.g. calling up patient data, saving measured results) are not available. Network settings are retained during rechargeable battery operation and are available as soon as the device is being operated on a stationary basis (supplied with power by the power supply unit) again.
Network functions	The device can be integrated into a PC network via a LAN interface or via WiFi. The seca connect 103 software is required to set up this integration. The seca connect 103 software receives measurement data from the device and forwards them to an EMR system.
Compatibility	seca connect 103 configuration software: Version 3.1 or higher, no downward compatibility

3 SAFETY PRECAUTIONS

3.1 Safety information 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 measuring results may be incorrect.

NOTE

Includes additional information about use of the device.

3.2 Basic safety information

Handling 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.
- ▶ In the interest of patient safety, you and your patients are obliged to report serious events that occur in connection with this product to the manufacturer and to the authority responsible in your country.


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 connected to medical electrical 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 edition 3.1 of IEC 60601-1 respectively). Anyone connecting additional devices to medical electrical devices is considered a system configurator and therefore responsible for ensuring that the system complies with the requirements of standards for systems. This also applies to additional devices recommended by seca. 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.

**CAUTION!****Patient hazard, damage to device**

- ▶ 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 user-serviceable parts. Only have servicing and repairs performed by an authorized seca service partner. You can find your local service partner at www.seca.com.
- ▶ Use only seca original accessories and spare parts, otherwise seca will not grant any warranty.

**CAUTION!****Patient hazard, malfunction**

- ▶ Keep other medical electrical devices, e.g. high-frequency surgical devices, a minimum distance of approx. 1 meter away to prevent faulty measurements or wireless transmission interference.
- ▶ Keep HF devices such as cellphones at a minimum distance of approx. 1 meter to prevent faulty measurements or wireless transmission interference.
- ▶ The actual transmission output of HF devices may require minimum distances of more than 1 meter. For details, go to www.seca.com.

Preventing electric shock**WARNING!****Electric shock**

- ▶ Set up devices which can be operated with a power supply unit so that the power supply socket is within easy reach and the power supply can be disconnected quickly.
- ▶ Ensure that your local electricity supply matches the details on the power supply unit.
- ▶ Never touch the power supply unit with wet hands.
- ▶ Do not use extension cables and multiple outlets.
- ▶ Ensure that cables are not crushed or damaged by sharp edges.
- ▶ Ensure 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.
- ▶ Only devices that are approved as medical devices and that have no separate power supply may be connected to the USB interface.

Preventing injuries and infections



WARNING!

Injury from device falling over

The device is intended as a mobile medical device and is therefore not anchored permanently to a wall or the floor. Combinations of devices with a handrail or measuring rod may fall over if not used properly (e.g. as a “climbing frame”).

- ▶ Do not leave children or persons with mental or motor impairments unsupervised.
- ▶ Do not leave pets unsupervised.



WARNING!

Injury from falling

- ▶ Ensure that the device is steady and level.
- ▶ Route connector cables (if present) so that neither users nor the patient can trip over them.
- ▶ The device is not designed for supporting patients when getting up, e.g. from a wheelchair. Assist people with limited motor skills when they are getting up, e.g. from a wheelchair.
- ▶ Ensure that the patient does not step directly onto or off the edges of the weighing platform.
- ▶ Ensure that the patient steps onto and off the weighing platform slowly and safely.



WARNING!

Risk of slipping

- ▶ Ensure that the patient standing area is dry before the patient steps onto it.
- ▶ Ensure that the patient has dry feet before stepping onto the patient standing area.
- ▶ Ensure that the patient steps onto and off the patient standing area slowly and safely.



CAUTION!

Injury, damage to device

The patient standing area consists of a glass plate. Damage (e.g. scratches, cracks or chips) represent a risk of injury. Damage can also lead to the glass plate breaking.

- ▶ Do not put any sharp-edged objects on the glass plate.
- ▶ Before using 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.
- ▶ Should the patient have contagious diseases, subject the device to a hygiene treatment as described in the relevant section of these instructions for use immediately afterwards.
- ▶ Ensure that the patient does not have any open wounds or infectious skin alterations which may come into contact with the device.
- ▶ Subject the device to a hygiene treatment at regular intervals.

Preventing damage to device

NOTICE!

Damage to device

- ▶ Ensure that fluids never get inside the device. These can destroy the electronics.
- ▶ For devices with power supply operation: Switch off the device before you disconnect the power supply unit from the power supply socket.
- ▶ For devices with power supply operation: If the device is not to be used for an extended period, disconnect the power supply unit from the power supply socket. Only then is the device de-energized.
- ▶ For devices with battery or rechargeable battery operation: If you are not using the device for an extended period of time, remove batteries or battery packs. Only then is the device de-energized.
- ▶ Do not drop the device.
- ▶ Do not subject the device to shocks or vibrations.
- ▶ Perform a function check before each use as described in the corresponding section in this document. Do not operate the device if it is not working properly or is damaged.
- ▶ Do not place the device in direct sunlight and ensure that it is not placed in the direct proximity of a heat source. The excessive temperatures could damage the electronics.
- ▶ Avoid rapid temperature fluctuations. If the device is transported so that a temperature difference of over 20 °C occurs, the device must be left to stand for at least 2 hours before it is switched on, otherwise condensation may form; this may damage the electronics.
- ▶ Use the device only in the intended ambient conditions outlined in the section entitled "Technical data".
- ▶ Store the device only in the intended storage conditions outlined in the section entitled "Technical data".
- ▶ Use only cleaning agents and disinfectants which match the details in the section entitled "Hygiene treatment".

NOTICE!

Damage to device

- ▶ Ensure that maximum capacity is not exceeded.

Handling measuring results



WARNING!

Patient hazard

To prevent misinterpretations, measuring results for medical purposes must only be displayed and used in SI units (kilograms/grams, meters/centimeters). Some devices have the option of displaying measuring results in different units. This is purely an additional function.

- ▶ Only use the measuring results in SI units.
- ▶ You as the user take sole responsibility for the use of measuring results in non-SI units.

NOTICE!

Inconsistent measuring results

- ▶ Before you save and continue using measured values determined using this device (e.g. in seca software or in an EMR system), ensure that the measured values are plausible.
- ▶ If measured values have been sent to seca software or to an EMR system, ensure before continuing to use them that the measured values are plausible and 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 - incorrect measurements will result.

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

NOTICE!**Faulty 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 meters of the front or side of the scale during the measurement procedure.
- ▶ Ensure that the device is at least 0.2 meters away from the wall.
- ▶ Ensure that the patient is not wearing any kind of hair accessory on top of their head.

Handling batteries and rechargeable batteries

**WARNING!****Injury**

Batteries and rechargeable batteries contain harmful substances which may explode and so escape if not handled properly.

- ▶ Do not try to recharge batteries.
- ▶ Do not expose batteries/rechargeable batteries to heat.
- ▶ Do not burn batteries/rechargeable batteries.
- ▶ If harmful substances are leaking out, avoid contact with the skin, eyes, and mucous membranes. Rinse affected areas of the body with plenty of clean water and seek medical help at once.

NOTICE!**Damage to device and malfunction due to incorrect handling**

- ▶ Use only the type of battery/rechargeable battery quoted in this document.
- ▶ Always replace all batteries/rechargeable batteries at the same time.
- ▶ Do not short-circuit batteries/rechargeable batteries.
- ▶ If you do not use the device for an extended period of time, remove the batteries/rechargeable batteries. This prevents acid from leaking into the device.
- ▶ If harmful substances have penetrated the device, do not continue using it. Have the device checked by an authorized seca service partner and repaired if necessary.

Handling packaging material

**WARNING!****Risk of suffocation**

Packaging materials made of plastic film (e.g. bags) present a risk of suffocation.

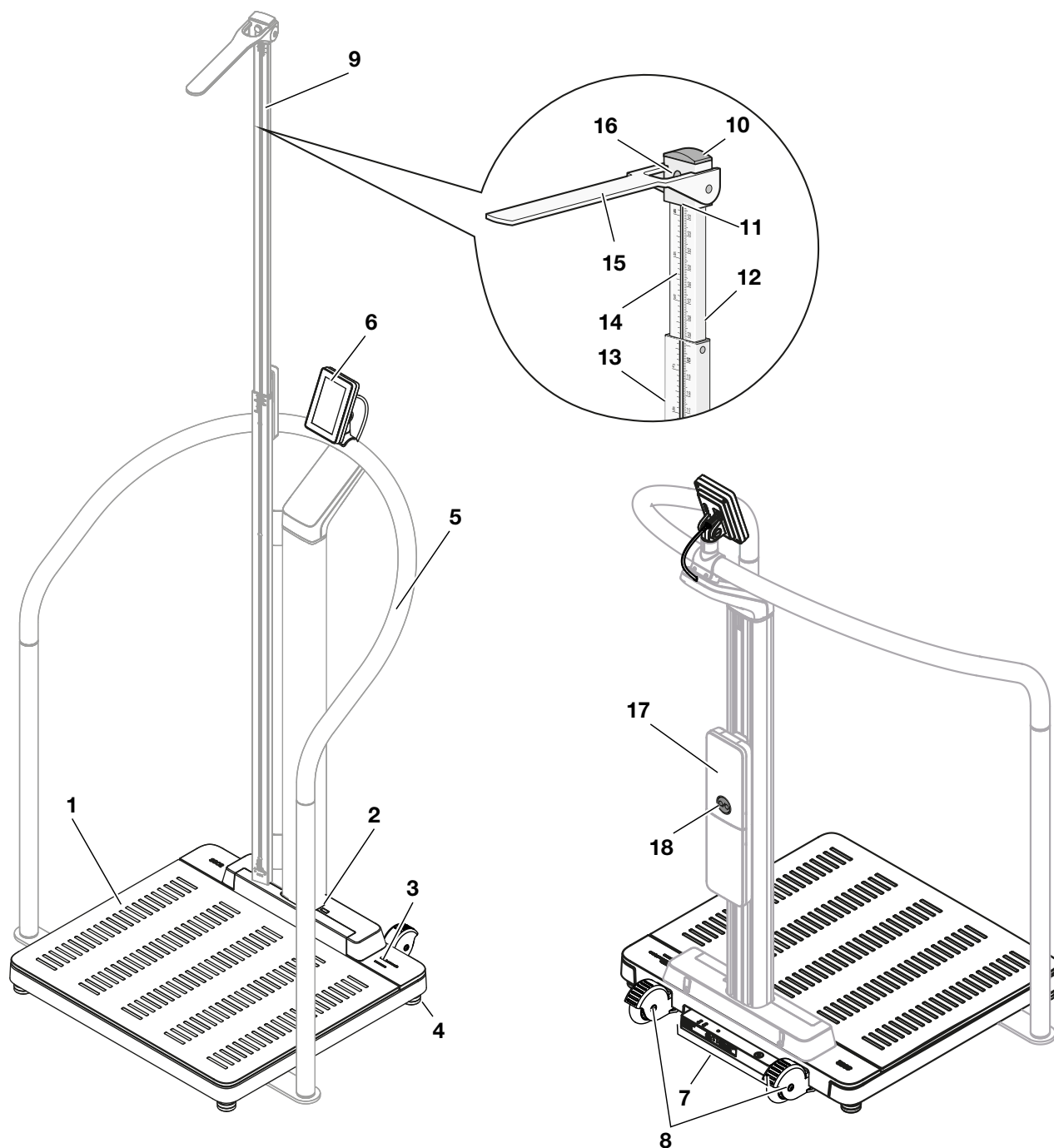
- ▶ Store packaging material out of the reach of children.
- ▶ If the original packaging material is no longer available, only use plastic bags with safety holes to reduce the risk of suffocation. Use recyclable materials if possible.

NOTE

Store the original packaging material for future use (e.g. returning for servicing).

4 OVERVIEW

4.1 Controls: Combination with digital measuring rod and battery pack

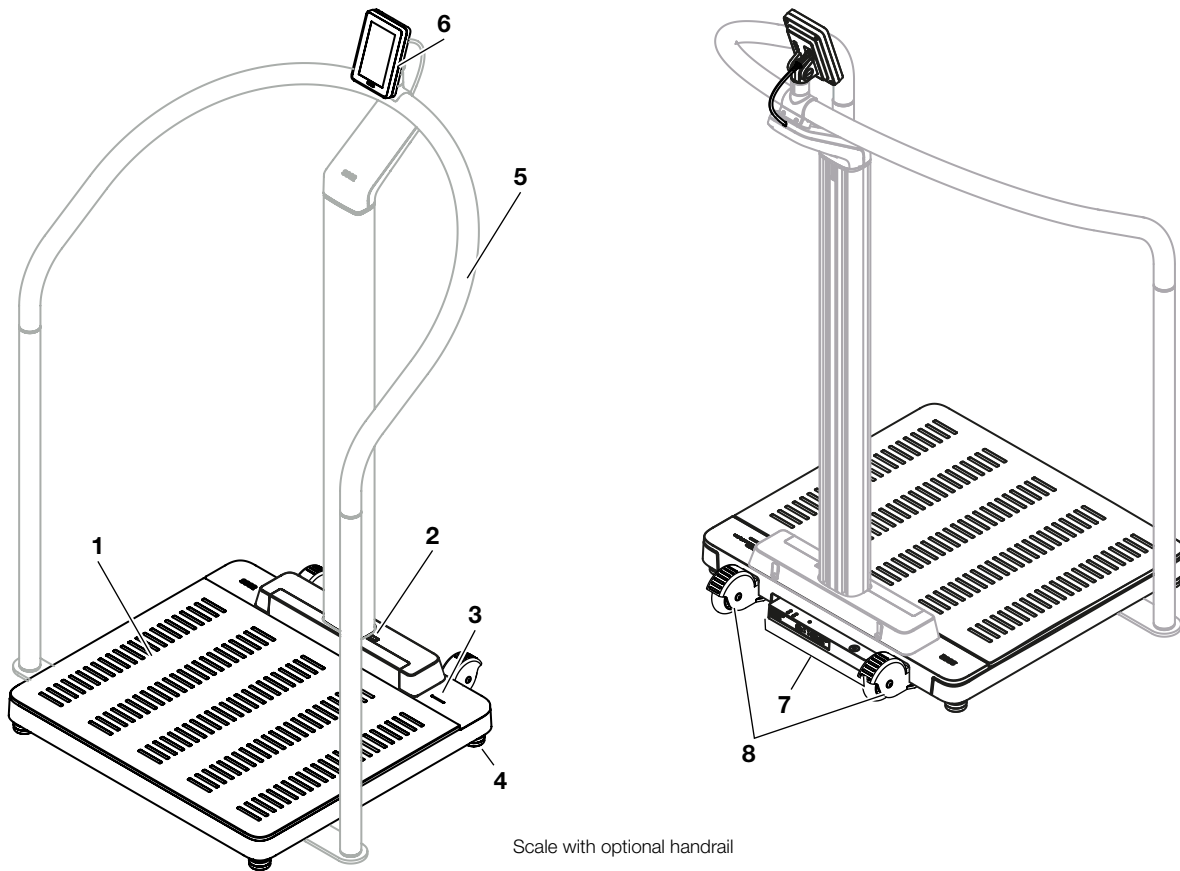


Front view: Scale with optional components:
Handrail, digital telescopic measuring rod

Rear view: Scale with optional components:
Handrail, battery pack

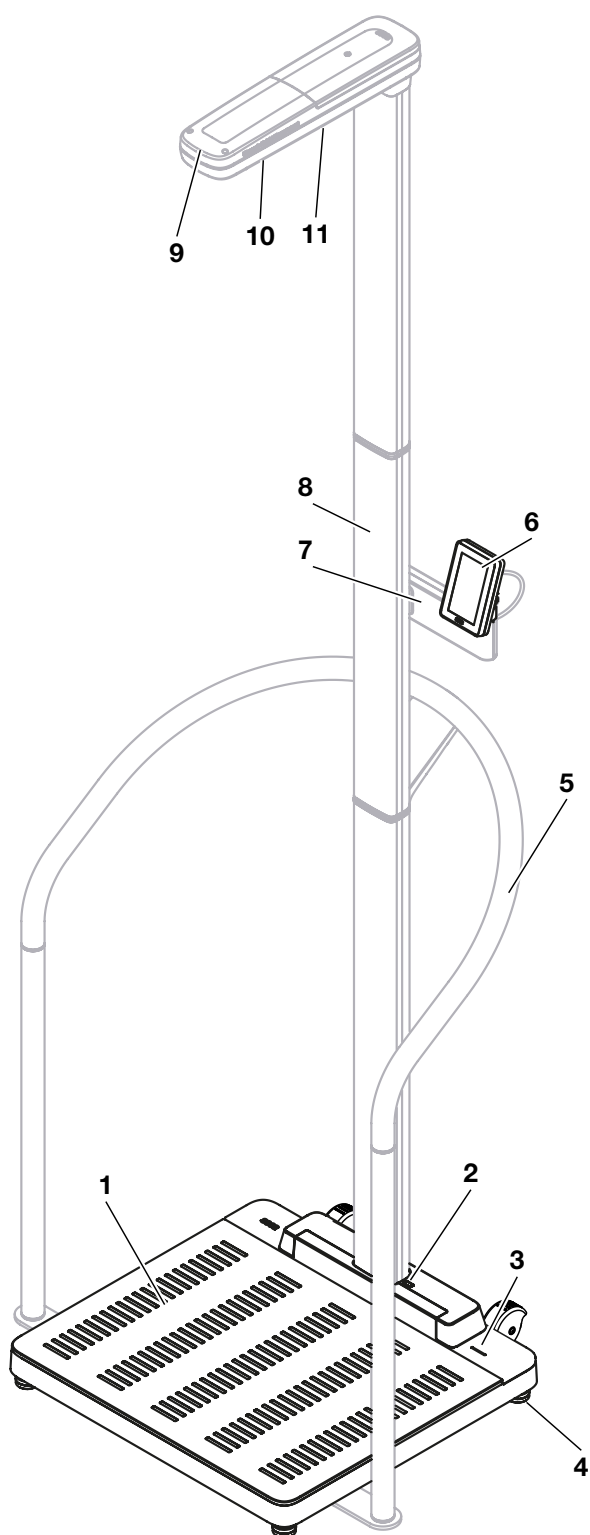
Item	Device component	Description
1	Weighing platform	- Records the weight of the patient - Illuminated foot silhouettes for measuring height
2	Infrared interface	For functional expansion; no function at present
3	Workflow LED	Indicates the status of data recording and data transmission (requirement: Connection to the seca connect 103 software) - Illuminated in green: Workflow active - Flashing green (approx. 5 seconds): Submitting measuring results to the EMR System (depending on setting) - Illuminated in green (approx. 5 seconds): Measuring results successfully submitted to the EMR System (depending on setting) - Illuminated in red (approx. 5 seconds): Error during data transmission or workflow NOTE The data recorded and transmitted are specified in the seca connect 103 software. If you have any queries, contact your administrator or hospital technician.
4	Foot screw	Used for precise alignment of the device (4 pcs)
5	seca 455 handrail (optional)	Used to support patients who are unable to stand securely Compatible seca products
6	Multifunctional display	Central control and display element → Symbols on the display (main screen), page 17 → Symbols on the display (menu), page 19
7	Connection panel	Used for power supply and data transmission → Interfaces, page 24
8	Caster	Used for transporting over short distances (2 pcs)
9	seca 254 digital telescopic measuring rod (optional)	- For measuring height (availability dependent on model and country) Compatible seca products - Can be combined with optional seca 453 battery pack → Optional accessories and spare parts, page 86
10	Head slide	For sliding the measuring flap onto the lower telescopic element
11	Read-off edge 1	For heights < 1.22 m, the measuring result is read off under the head slide
12	Read-off edge 2	For heights ≥ 1.22 m, the measuring result is read off the upper edge of the lower telescopic element
13	Lower telescopic element	For measuring height < 1.22 m
14	Upper telescopic element	For measuring height ≥ 1.22 m
15	Measuring flap	Serves as a head stop for measuring height
16	Lock	For releasing and locking the head slide
17	seca 453 battery pack (optional)	- For mobile power supply (availability depends on model and individual country) → Optional accessories and spare parts, page 86 - Can be combined with optional seca 254 digital telescopic measuring rod Compatible seca products
18	On/off key	- For switching the device on and off in rechargeable battery operation - Flashing green briefly when switched on: Rechargeable battery operation starting - Flashing red quickly when switched on: Battery pack discharged - Flashing green slowly: Power supply operation, charging battery pack - Illuminated in green: Power supply operation, battery pack fully charged

4.2 Controls: Combination with handrail

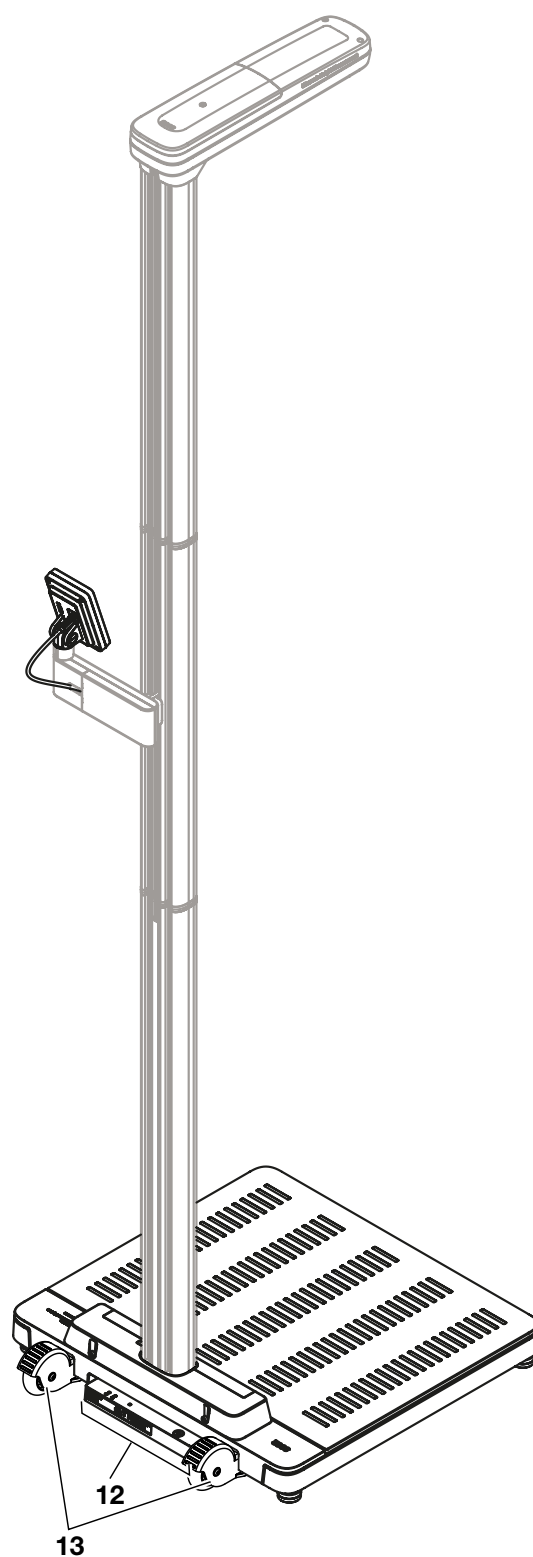


Item	Device component	Description
1	Weighing platform	- Records the weight of the patient - Illuminated foot silhouettes for weight measurement
2	Infrared interface	For functional expansion; no function at present
3	Workflow LED	Indicates the status of data recording and data transmission (requirement: connection to the seca connect 103 software) - Illuminated in green: Workflow active - Flashing green (approx. 5 seconds): Submitting measuring results to the EMR System (depending on setting) - Illuminated in green (approx. 5 seconds): Measuring results successfully submitted to the EMR System (depending on setting) - Illuminated in red (approx. 5 seconds): Error during data transmission or workflow NOTE The data recorded and transmitted are specified in the seca connect 103 software. If you have any queries, contact your administrator or hospital technician.
4	Foot screw	Used for precise alignment of the device (4 pcs)
5	seca 455 handrail (optional)	- Used to support patients who are unable to stand securely - Installation option for the multifunctional display - Compatible seca products
6	Multifunctional display	Central control and display element → Symbols on the display (main screen), page 17 → Symbols on the display (menu), page 19
7	Connection panel	Used for power supply and data transmission → Interfaces, page 24
8	Caster	Used for transporting over short distances (2 pcs)

4.3 Controls: Combination with ultrasonic measuring rod



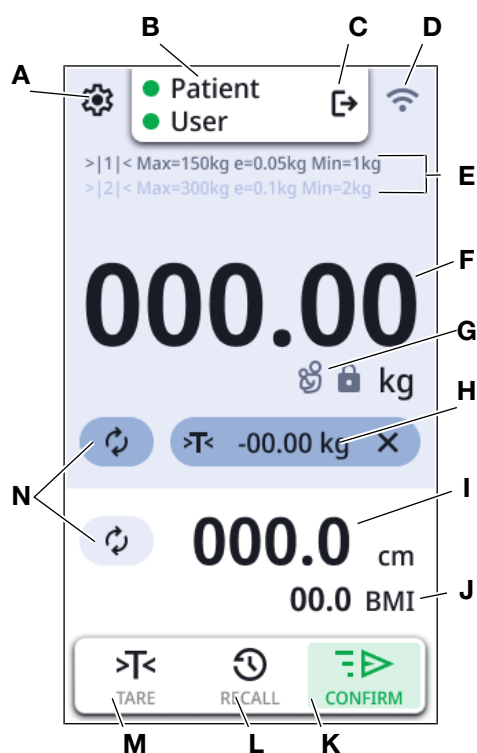
Front view, scale with optional components:
handrail, ultrasonic measuring rod



Rear view, scale
with optional ultrasonic measuring rod

Item	Device component	Description
1	Weighing platform	- Records the weight of the patient - Illuminated foot silhouettes for weight and height measurement
2	Infrared interface	For functional expansion; no function at present
3	Workflow LED	Indicates the status of data recording and data transmission (requirement: connection to the seca connect 103 software) - Illuminated in green: Workflow active - Flashing green (approx. 5 seconds): Submitting measuring results to the EMR System (depending on setting) - Illuminated in green (approx. 5 seconds): Measuring results successfully submitted to the EMR System (depending on setting) - Illuminated in red (approx. 5 seconds): Error during data transmission or workflow NOTE The data recorded and transmitted are specified in the seca connect 103 software. If you have any queries, contact your administrator or hospital technician.
4	Foot screw	Used for precise alignment of the device (4 pcs)
5	seca 455 handrail (optional)	Used to support patients who are unable to stand securely Compatible seca products
6	Multifunctional display	Central control and display element → Symbols on the display (main screen), page 17 → Symbols on the display (menu), page 19
7	Bracket for multifunctional display	Used to install the multifunctional display on the measuring rod
8	seca 257 ultrasonic measuring rod (optional)	For measuring height Compatible seca products
9	Power LED	Indicates the operating status of the measuring rod
10	Ultrasonic sensors	For measuring height
11	Loudspeaker	For voice output
12	Connection panel	Used for power supply and data transmission → Interfaces, page 24
13	Caster	Used for transporting over short distances (2 pcs)

4.4 Symbols on the display (main screen)

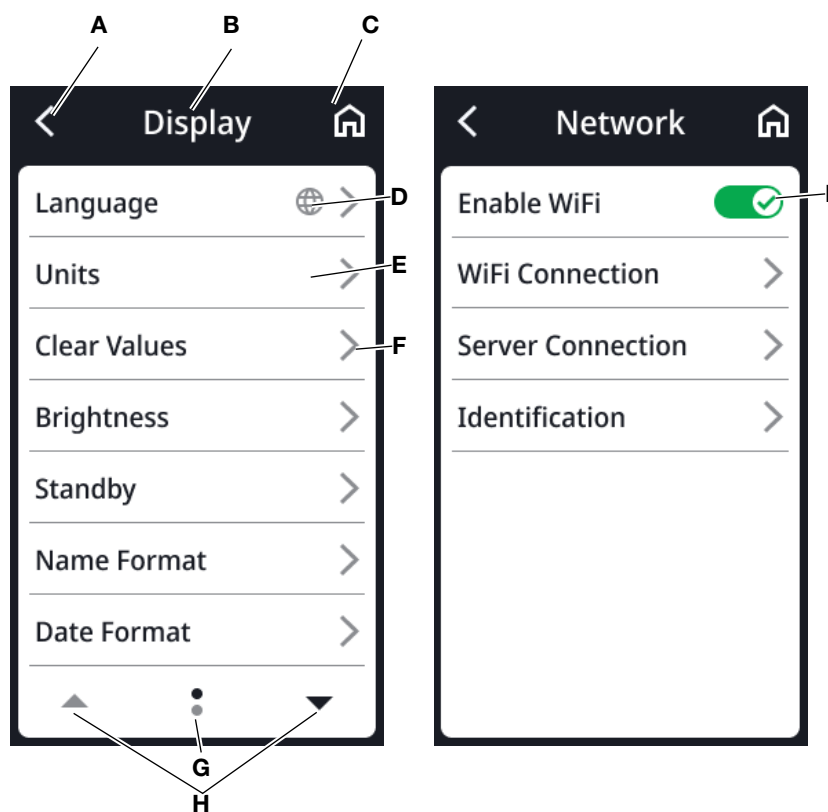


Item	Display element	Description
A		Open menu (→ Configuration, page 52)
B	- Patient - User	Only if connected to an EMR system of a third-party provider (via seca connect 103) : Indicates that an ID was recorded
C		Log out user: The recorded IDs are discarded.
D		Simple Print is active: Device is set up for operation with a printer
		Configuration Mode active: Web server activated for further configurations
		WiFi connection status display: - WiFi unavailable - WiFi activated, no signal - Signal very weak - Signal weak - Signal good - Signal optimal

Item	Display element	Description
		LAN connection status display:  not available  deactivated  activated
		 Battery pack discharged  Battery pack almost discharged  Battery pack almost charged  Battery pack fully charged, mobile operation  Battery pack fully charged, power supply operation
E	Weighing technology data	- Weighing ranges: $\rightarrow 1 \leftarrow$, $\rightarrow 2 \leftarrow$ - Max: Maximum load per weighing range - e: Graduations (calibrated models) - d: Graduations (non-verified models) - Min: Minimum load per weighing range
F	NET	Net weight: The value displayed is reduced by a tare value
	Weight display field	Weight: Units: - Kilograms - Pounds (non-verified models)
G		Requirements: Weighing platform has a load on it; Autohold function is active : Weight value stable : Weight value not stable
		Mother/Child function active - The value displayed is the weight of the child (mother saved as tare)
H		Tare bar (appears as soon as a tare value is active): - Repeat measurement - Current tare value - Delete tare value
I	Height display field	Height, press display for manual input: Units: - Centimeters - Feet/inch(es) (non-verified models)
J	Body Size Indicator display field	Body size indicator (press display field to switch): BMI: Body Mass Index (kg/m²): Automatic calculation BSA (DuBois): Body Surface Area (m²): Automatic calculation BSA (Haycock): Body Surface Area (m²): Automatic calculation BSA (Mosteller): Body Surface Area (m²): Automatic calculation Body Size Indicator (activate/deactivate in menu: → Selecting BMI/BSA, page 61)
K		CONFIRM button: Send data to an EMR system  (Green symbol): When connected to an EMR system  (White symbol): Without function in stand-alone operation

Item	Display element	Description
L		RECALL button: Display last value measured (→ Displaying the last weight measured, page 42)
M		Tare Assistant button: Remove additional weights → Weighing babies/toddlers, page 42 → Taring off clothing/accessories, page 44 → Taring off additional weight, page 45
N		Repeat measurement for current patient - Measure the current patient's weight once more - Measure the current patient's height once more
Not shown.		Confirm manual input
Not shown.		Continue to next step

4.5 Symbols on the display (menu)

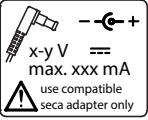


Item	Symbol	Description
A		Back to the higher menu level
B	Header	Indicates the current menu level
C		Back to the main screen
D		Keys with this symbol lead to the Display \ Language menu item
E		The menu item is locked. It is released by the administrator.
F		• Submenu available • Setting options available
G		• Pages per menu level (here: 2) • Current page is displayed (here: 1)
H		Select page in the menu
I		Press: Activate/deactivate function •  Function activated •  Function deactivated

4.6 Labels

Markings on the device and on the type plate	
Symbol	Meaning
	Name and address of manufacturer, date of manufacture
UDI	Unique Device Identifier (product identification number)
REF	Article number
SN	Serial number
GAL	Value in m/s^2 (model-dependent) • Gravitational acceleration on earth • Depends on the intended location
ProdID	Product identification number
Approval Type	Type designation of design approval
 eIFU	Electronic instructions for use

Markings on the device and on the type plate	
Symbol	Meaning
	Device can tip over. Do not push or lean against it (devices with handrail or measuring rod)
	Medical electrical device, type BF
IP21	Type of protection in accordance with IEC 60529: • Protection against ingress of solid foreign objects with a diameter of over 12.5 mm • Protection against access with fingers • Protection against dripping water
e	Value in units of mass (verified models) Used to classify and verify a scale
d	Value in units of mass (non-verified models) States the difference between two consecutive display values
$\rightarrow x \leftarrow$	Active weighing range
	Class III scale as per Directive 2014/31/EU
	Device complies with EU directives • M: Conformity label in compliance with directive 2014/31/EU for non-automatic scales (verified models) • 22: (Example: 2022) Year in which the declaration of conformity was made and the CE label was applied (verified models) • 0102: Notified Body for Metrology (verified models) • 0123: Notified Body for Medical Devices
	Medical device in accordance with Regulation (EU) 2017/745
	Device meets the requirements of the USA and Canada. Certified and tested by a licensing laboratory (NRTL) of TÜV SÜD Product Services GmbH.
	Device complies with United Kingdom directives • M: Conformity label in compliance with UK directive SI 2016 no. 1152 for non-automatic scales (NAWIR) (verified models) • 22: (Example: 2022) year in which declaration of conformity was implemented and the UKCA label was applied (verified models) • xxxx: Notified Body for Medical Devices of the United Kingdom • yyyy: Notified Body for Metrology of the United Kingdom (verified models)
	Importer/representative in the United Kingdom: seca Ltd 40 Barn Street B5 5QB Birmingham United Kingdom
	Importer/representative in Switzerland: seca ag (schweiz) Medizinische Waagen und Messsysteme Schönmatt Str. 2 CH-4153 REINACH

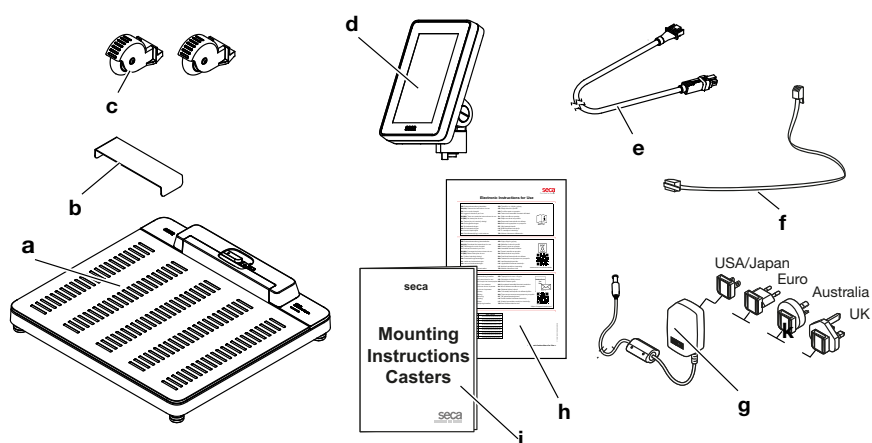
Markings on the device and on the type plate	
Symbol	Meaning
	Symbol of the US authority the Federal Communications Commission (FCC)
FCC ID	Device license number registered with the US authority US Federal Communications Commission (FCC)
IC ID	Device license number registered with the authority Industry Canada
	Type plate on the power supply connection socket • Power supply voltage required in V • Maximum current consumption in mA • : Note polarity of device connector • : Operate device with direct current • : Use compatible seca power supply units only
	LAN interface
	USB interface
	Power LED
	Network LED
	WPS button
	Reset button
	Interface for multifunctional display
	Do not dispose of device in household waste

Markings on the packaging	
Symbol	Meaning
	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. humidity for transport and storage

Markings on the packaging	
Symbol	Meaning
	Permitted min. and max. air pressure for transport and storage
	Open packaging here
	Packaging material can be disposed of through recycling programs

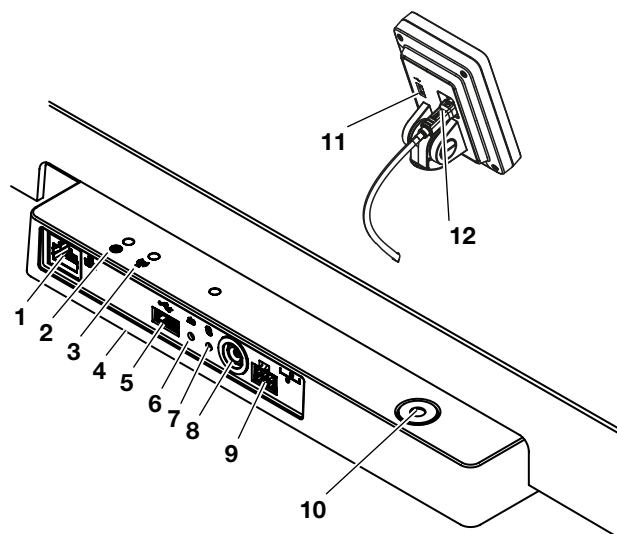
5 STARTING UP DEVICE

5.1 Scope of delivery



Item	Component	Pcs.
a	Scale	1
b	Drip guard, transparent	1
c	Caster for transport over short distances	2
d	Multifunctional display	1
e	Display cable	1
f	Network cable	1
g	Plug-in power supply unit with adapters	1
h	Information on electronic instructions for use (eIFU)	1
i	Assembly instructions, casters	1

5.2 Interfaces

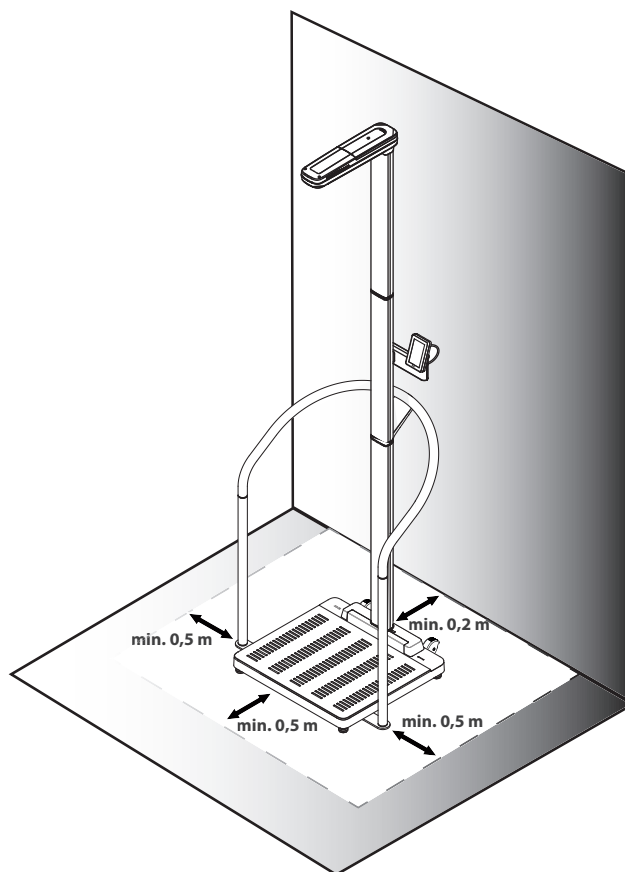


Item	Device component	Function
1	LAN interface	Used to connect the device to the EMR System in your institution (alternative to WiFi connection, seca connect 103 software required).
2	Power LED	• Illuminated in green: Device is ready for use • Illuminated in red: Device is defective • Flashing green: Device is active as access point
3	Network LED	• Flashing green: Establishing network connection • Illuminated in green: Network connection established • Illuminated in red: Network connection interrupted
4	WiFi module (internal)	Used to connect the device to the EMR System in your institution (alternative to LAN connection, seca connect 103 software required)
5	USB interface, weighing platform	No function in this device variant, use USB interface on multifunctional display
6	Reset button	• Press and hold (approx. 8 seconds): Reset settings • Press briefly (approx. 1 second): Activate/deactivate access point function
7	WPS button	Establishing WiFi connection via WPS
8	Power supply connection	Used to connect the plug-in power supply unit
9	Display socket	No function for this device variant, display is connected to internal interface when device is assembled
10	Spirit level	Indicates whether the device is horizontal
11	USB interface, multifunctional display	For connecting a barcode scanner (accessory required: seca 463 scanner bracket) → Optional accessories and spare parts, page 86
12	Display interface	For supplying power to the multifunctional display and for data transmission

5.3 Setting up device

To achieve accurate measuring results, the floor at the setup location must be level and stable. Soft floors, such as wooden boards, give under the patient's weight and falsify the measuring result.

1. Place the device on a firm, level surface.
2. Only for devices with an ultrasonic measuring rod: Mark the area shown in the illustration using colored adhesive tape, for example.



Example device configuration: seca 655 scale
seca 455 handrail, seca 257 ultrasonic measuring rod

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 - incorrect measurements will result.

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

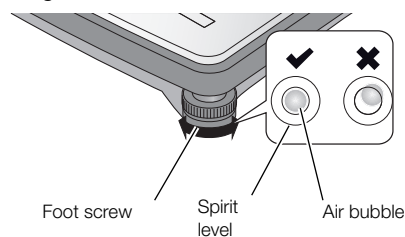
NOTICE!

Faulty 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 meters of the front or side of the scale during the measurement procedure.
- Ensure that the device is at least 0.2 meters away from the wall.
- Ensure that the patient is not wearing any kind of hair accessory on top of their head.

3. Align the device by turning the foot screws.

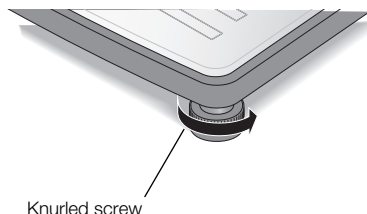


- ⇒ The device is positioned horizontally when the air bubble of the spirit level is in the precise center of the circle.

**CAUTION!****Injury from a lack of stability**

If the foot screws are screwed out too far, they may come loose from the device. The device will then be unstable.

- ▶ Screw the foot screws out a maximum of 10 mm.
- ▶ If the device cannot be aligned horizontally with the screws screwed out as far as possible, the setup location is unsuitable. Set the device up in a suitable location.



4. Tighten the knurled wheels in the direction of the arrow.
⇒ The foot screws are secured against being maladjusted.
5. If an ultrasonic measuring rod is fitted, calibrate it → [Calibrating ultrasonic measuring rod, page 59](#).

5.4 Connecting a barcode scanner (optional)

A barcode scanner can be connected to the USB interface of the multifunctional display.

The barcode scanner is required for the following functions:

- **Configuration:** Define network data in the **seca connect 103** software and transmit them to the device using the QR code: → [Setting up network functions, page 65](#)
- **Operation:** Record patient and user IDs for transmitting measuring results to an EMR system: → [Completing the measurement, page 47](#)

**WARNING!****Injury**

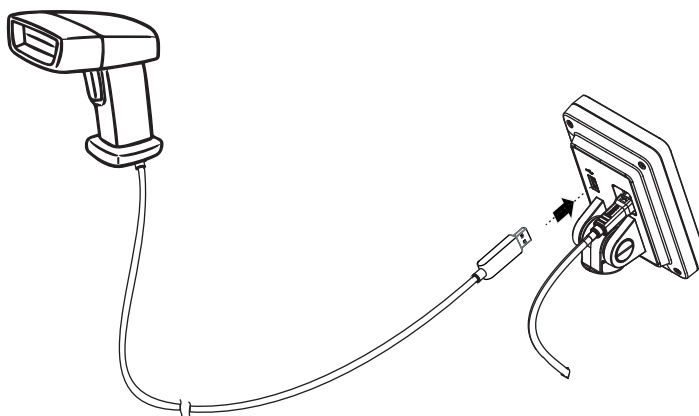
- ▶ Route the connector cable so that patients cannot become caught or strangle themselves in it.
- ▶ Route the connecting cable so as to prevent patients and users tripping.

NOTE

- ▶ Observe the maximum permitted current consumption of the barcode scanner.
- ▶ Use only barcode scanners recommended by seca.
- ▶ The device is compatible with NFC/RFID scanners. For details, contact seca Service.

To connect a barcode scanner, proceed as follows:

1. Ensure that the device is disconnected from the power supply.
2. Plug the USB stick of the barcode scanner into the USB socket of the multifunctional display.



3. Hang the barcode scanner in a suitable holder (e.g. **seca 463** scanner bracket → [Optional accessories and spare parts, page 86](#)).

NOTICE!

Faulty measurement

The barcode scanner and scanner bracket are in the weighing-sensitive area of the device. If the barcode scanner is not replaced in the scanner bracket after scanning, the measured result will be falsified.

- Place the scanner back in the scanner bracket after each scanning procedure.

4. Establish the power supply → [Establishing power supply, page 27](#).

5.5 Establishing power supply

The device is supplied with power by a plug-in power supply unit.



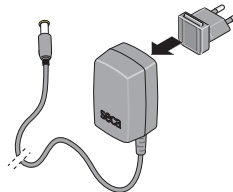
WARNING!

Personal injury or damage to device as a result of incorrect power supply units

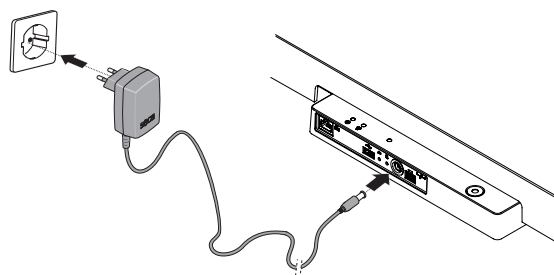
Conventional power supply units may deliver a higher voltage than is indicated on them. The measuring device may overheat, catch fire, melt or short-circuit.

- Use only original seca power supply units with a controlled 12 V output voltage.

1. Plug the adapter required for your power supply into the power supply unit.



2. Insert the device connector of the power supply unit into the power supply connection socket of the device.
3. Plug the power supply unit into a power supply socket.



4. Perform a function check → [Function check, page 73](#).

5.6 Installing the drip guard

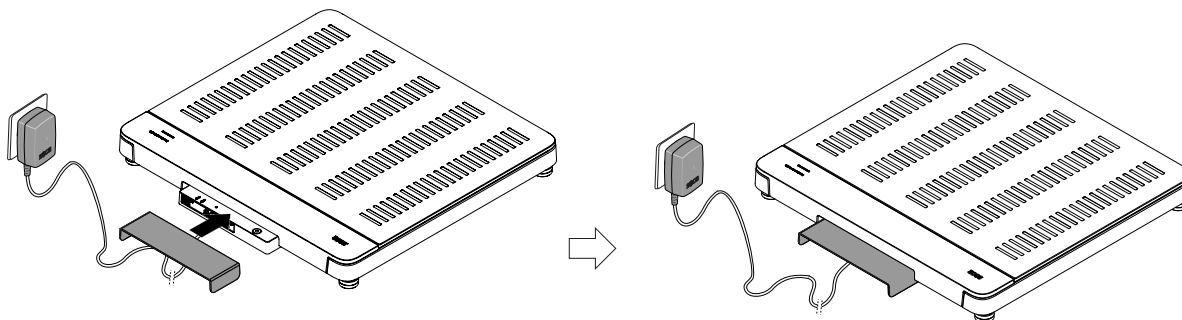
NOTICE!

Damage to device due to the ingress of fluids

Damage may occur to the device if dripping water or other dripping fluids enter the device via the connection panel.

► Only operate the device with the drip guard installed.

1. Connect all cables as described in these instructions for use and in the installation instructions for the compatible products.
2. Position the drip guard on the connection panel as shown in the illustration.
3. Push the drip guard beneath the weighing platform up to the stop.



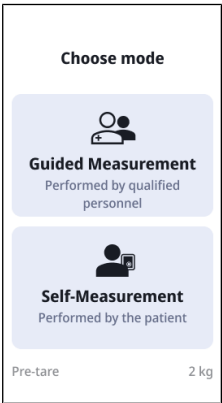
5.7 Selecting the language and measurement mode

When you start up the device for the first time, you must select the display language and set the measurement mode.

1. Establish the power supply.
⇒ The available languages are displayed.
2. Press the desired language (here: English).



3. Press the ✓ key to confirm your entry.
⇒ The display language selected is adopted.
⇒ Mode selection is displayed.



NOTE
Language selection is displayed only when starting up the device for the first time. With routine operation, the language can be changed under **Settings**. To change the measurement mode, it is necessary to restart the device.
The **Self-Measurement** measurement mode is not available for the combinations of devices with the **seca 254** telescopic measuring rod and/or the **seca 453** battery pack.

4. Press the desired mode.
⇒ The device switches to the selected mode and is ready for operation.

Mode	Display
Guided Measurement → Operation, page 31	
Self-Measurement → Using “self-measurement”, page 49	

5.8 Adapting device settings

You have the following options for setting up the device for different usage situations:

- → [Changing measurement mode, page 52](#)
- → [Calling up/exiting a menu, page 53](#)
- → [Setting up network functions, page 65](#)
- → [Calibrating ultrasonic measuring rod, page 59](#)

5.9 Transporting device

The device has two casters that facilitate transport over short distances.



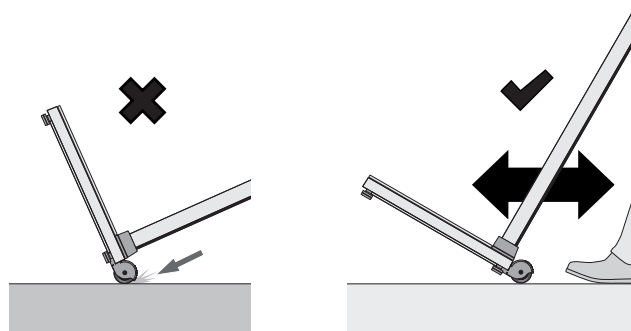
CAUTION!

Injury, damage to device

The device must be tilted for transport. If the device is tilted and transported carelessly, this may lead to injuries and damage to the device.

- ▶ Ensure that there is no-one else in the immediate vicinity throughout the entire transport operation.
- ▶ Ensure that there are no objects in the immediate vicinity throughout the entire transport operation.

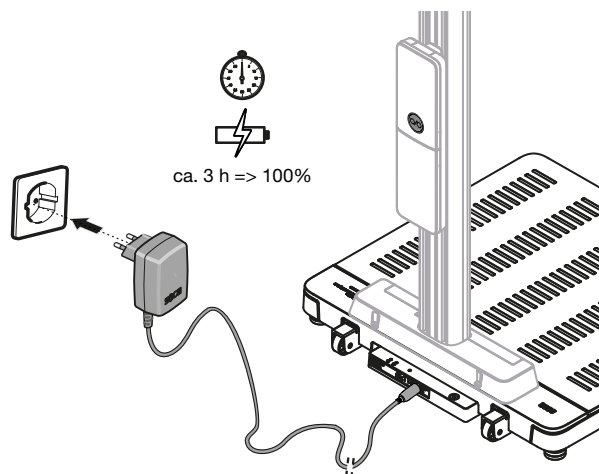
1. Remove the drip guard.
2. Disconnect all the device cable connections (e.g. power supply, network).
3. Tilt the device until it can be moved freely on the casters.



4. Transport the device to its new setup location.
5. Set up the device.
6. Re-establish all cable connections.
7. Install the drip guard.

5.10 Charging optional battery pack

1. Ensure that the **seca 453** battery pack is correctly fitted, as described in the corresponding assembly instructions.
2. Establish the power supply for the device → [Establishing power supply, page 27](#).



⇒ The charging process starts automatically.

⇒ The  key on the battery pack flashes green slowly.

⇒ The battery pack is fully charged when the  key of the battery pack is permanently green.

6 OPERATION

WARNING! Injury from falling

- ▶ Ensure that the device is steady and level.
- ▶ Route connector cables (if present) so that neither users nor the patient can trip over them.
- ▶ The device is not designed for supporting patients when getting up, e.g. from a wheelchair. Assist people with limited motor skills when they are getting up, e.g. from a wheelchair.
- ▶ Ensure that the patient does not step directly onto or off the edges of the weighing platform.
- ▶ Ensure 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 patient has dry feet before stepping onto the weighing platform.
- ▶ Ensure that the patient steps onto and off the weighing platform slowly and safely.

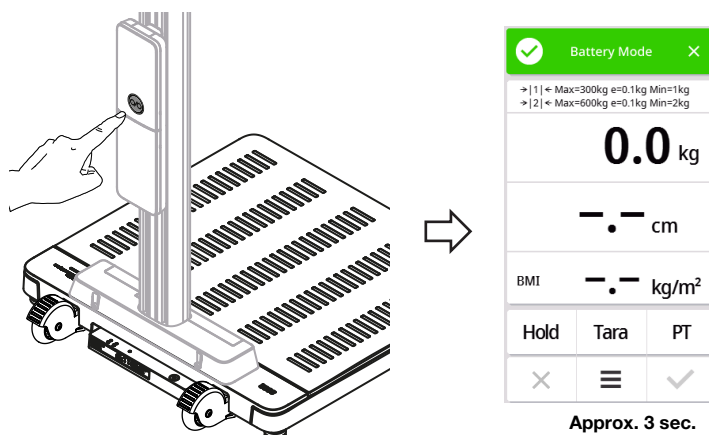
NOTE

The availability of some functions is dependent on device mode. If you require functions that are not available in the current device mode, ask your administrator or hospital technician whether the device mode can be changed.

6.1 Switching the device on/off (rechargeable battery operation only)

If your device is equipped with the optional **seca 453** battery pack and is being used on a mobile basis, you must first switch on the device at the location it is being used:

1. Press the  key on the battery pack.
 - ⇒ The  key illuminates green briefly.
 - ⇒ The device and the multifunctional display switch on.
 - ⇒ The **Battery mode active** message is briefly displayed.



2. Complete measurements as described in the relevant sections of these instructions for use.



WARNING!

Incorrect assignment of measuring results, data loss

Network functions are deactivated in battery pack mode. Patient data cannot be loaded automatically/electronically. Measuring results cannot be saved.

- Make sure that measuring results are plausible.
- Enter measuring results manually in the correct patient file immediately after measurement.

3. To switch off the device, press and hold the  key of the battery pack.
 - ⇒ The multifunctional display goes out.
 - ⇒ The device is switched off.

NOTE

After 30 seconds' inactivity, the display goes dark to save energy.

After 5 minutes' inactivity, the device switches off automatically. You can modify this time period → [Setting the time period for automatic switch-off, battery pack mode only, page 55.](#)

4. Restore the power supply using the power supply unit after each mobile use → [Establishing power supply, page 27.](#)
 - ⇒ The device is ready for use on a stationary basis.
 - ⇒ The battery pack charges automatically.
 - ⇒ Network functions are active.

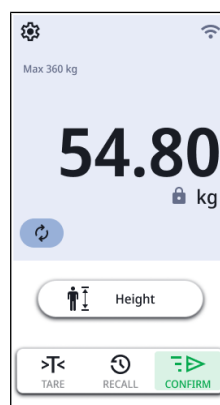
6.2 Measuring weight

**CAUTION!****Injury from falling**

Persons with limited mobility may fall when stepping on or off the weighing platform.

► Support people with limited mobility when they step on and off the scale.

1. Make sure that there is no load on the weighing platform.
2. Ask the patient to step onto the weighing platform.
3. Ask the patient to keep still.
4. Wait until a stable measured value is displayed.
5. Read off the measuring result.



6.3 Entering height manually



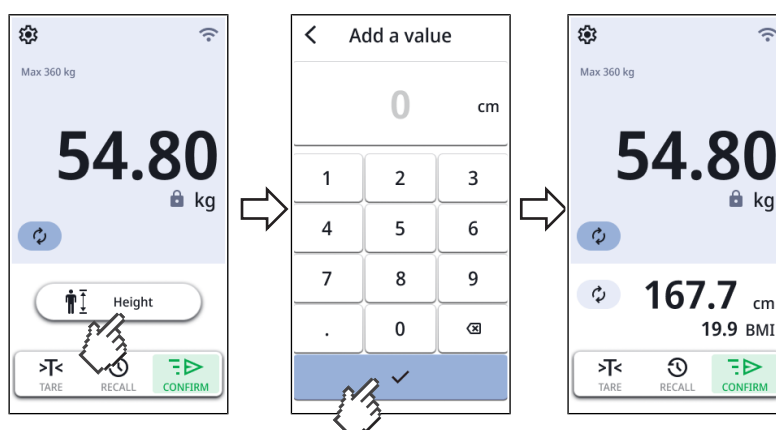
CAUTION!

Patient hazard

To prevent misinterpretations, measuring results for medical purposes must only be displayed and used in SI units (kilograms/grams, meters/centimeters). Some devices have the option of displaying measuring results in different units. This is purely an additional function.

- ▶ Only use the measuring results in SI units.
- ▶ You as the user take sole responsibility for the use of measuring results in non-SI units.

1. Press the **Height** field.
2. Enter the height.



3. Press the ✓ key to adopt the measuring result.
 - ⇒ The measuring results are displayed.
 - ⇒ When activated, **BMI** or **BSA** (here: **BMI**) are automatically calculated and displayed.
4. You have the following options for continuing:
 - ▶ Stand-alone devices: Enter measuring result in the patient file manually
 - ▶ Devices with a network connection: Complete the measurement: → [Completing the measurement, page 47](#)

6.4 Measuring weight and height (devices with ultrasonic measuring rod)



CAUTION!

Injury from falling

Persons with limited mobility may fall when stepping on or off the weighing platform.

- ▶ Support people with limited mobility when they step on and off the scale.



CAUTION!

Faulty measurement due to incorrect posture

If the patient adopts an incorrect posture, the height cannot be measured correctly. This may lead to misinterpretations and consequently to misdiagnoses.

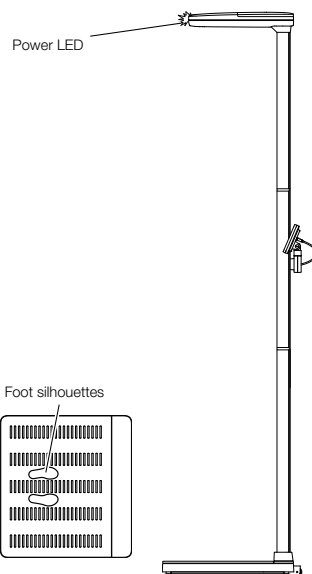
- ▶ Before commencing measurement, make sure that the patient adopts the correct posture as described in these instructions for use.

NOTICE!**Faulty measurement due to reflections**

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

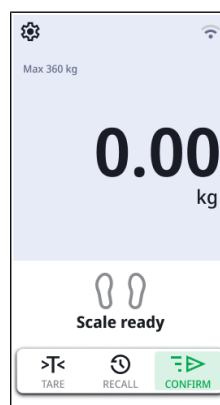
- ▶ Ensure that there are no objects or people within 0.5 meters of the front or side of the scale during the measurement procedure.
- ▶ Ensure that the device is at least 0.2 meters away from the wall.
- ▶ Ensure that the patient is not wearing any kind of hair accessory on top of their head.

The measurement procedure described as follows is based on the voice guidance pre-set at the factory. Information about configuration options can be found here: → [Configuring voice guidance \(devices with ultrasonic measuring rod\)](#), page 69.

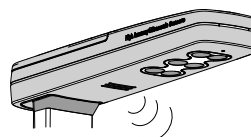


- ✓ There is no load on the weighing platform
- ✓ Power LED on ultrasound head is illuminated
- ✓ Foot silhouettes on the weighing platform are illuminated

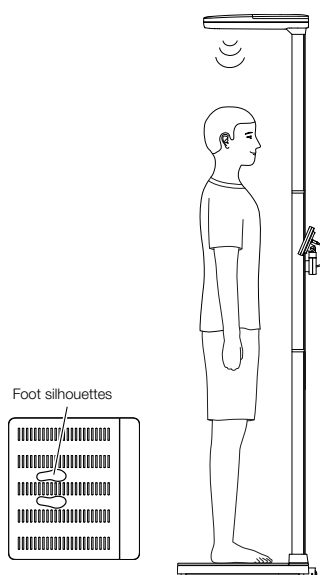
1. If necessary, press the multifunctional display screen to "wake" the device from standby.



2. Ask the patient to step onto the weighing platform facing the column.
3. Ask the patient to follow the instructions given by the device.

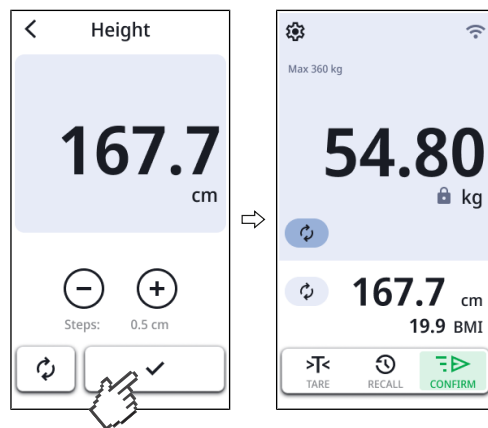


4. Make sure that the patient's posture is correct:
 - ▶ Face towards the column of the device
 - ▶ Feet on the illuminated foot silhouettes
 - ▶ Upright posture: Back and head straight
5. Wait until a stable measured value is displayed and the **Height** button is displayed.





6. Press the **Height** field.
⇒ Height measurement starts.
7. Wait until measurement is complete.
⇒ The height is displayed.
8. You have the following options for continuing:
 - ▶ Adjust the measuring result: Use the **−** or **+** key to increase or reduce the value
 - ▶ Adopt the measuring result: Press the **✓** key



- ⇒ The measuring results are displayed.
 - ⇒ When activated, **BMI** or **BSA** (here: **BMI**) are automatically calculated and displayed.
9. Information on how to complete measurement can be found here: → [Completing the measurement, page 47](#)

6.5 Measuring weight and height (devices with digital measuring rod)



CAUTION!

Injury from falling

Persons with limited mobility may fall when stepping on or off the weighing platform.

- Support people with limited mobility when they step on and off the scale.



CAUTION!

Injury from incorrect position of the measuring flap

Injuries may result if the measuring flap is at patient height when folded out.

- Ensure that the measuring flap is positioned well above the patient's head before the patient steps onto the weighing platform.



CAUTION!

Faulty measurement due to incorrect posture

If the patient adopts an incorrect posture, the height cannot be measured correctly. This may lead to misinterpretations and consequently to misdiagnoses.

- Before commencing measurement, make sure that the patient adopts the correct posture as described in these instructions for use.



CAUTION!

Implausible measured results

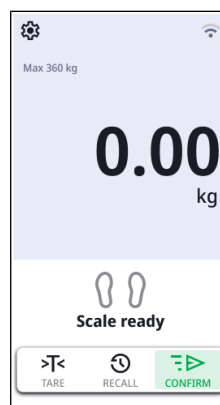
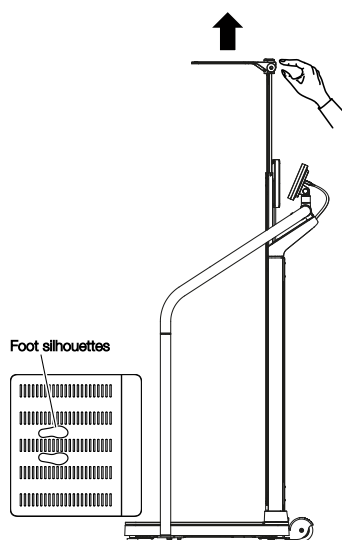
If substances containing grease get onto the column of the measuring rod, the head slide may slip, falsifying the measured results.

- Always operate the measuring rod with clean, dry hands.

Measuring heights
≥ 1.22 m

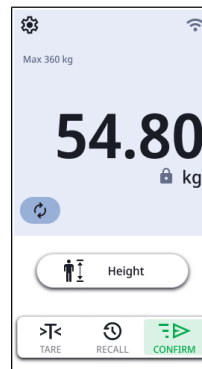
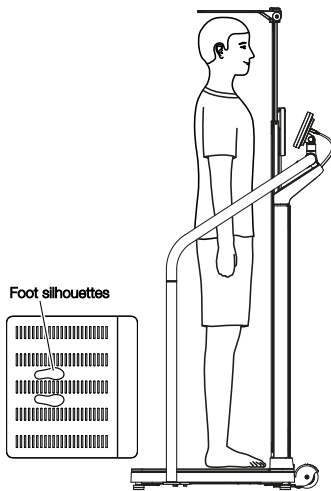
- ✓ There is no load on the weighing platform
- ✓ The upper telescopic element is pushed all the way in
- ✓ The measuring flap is folded down

1. If necessary, press the multifunctional display screen to "wake" the device from standby.

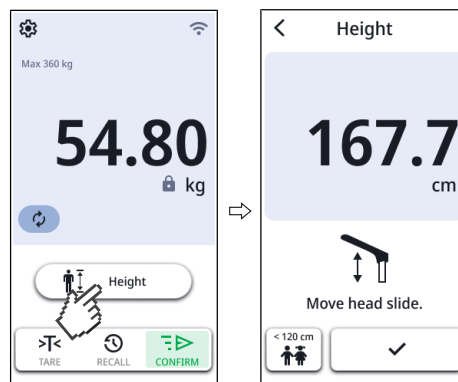
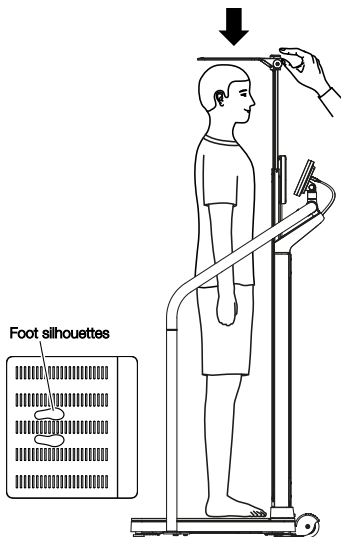


2. Fold up the measuring flap until it engages in a horizontal position.
3. Extend the upper telescopic element until the patient can get under the measuring flap comfortably.

4. Ask the patient to stand under the measuring flap and to adopt the position below.
 - ▶ Face towards the column of the device
 - ▶ Upright posture: Back and head straight
5. Wait until a stable measured value is displayed and the **Height** button is displayed.

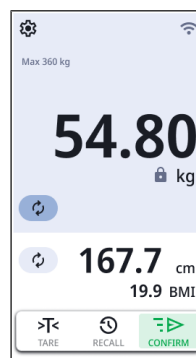


6. Press the **Height** field.
7. Push the upper telescopic element down until the measuring flap is in contact with the patient's head.
8. Wait until a stable height value is displayed:



⇒ The ✓ key is activated

9. Press the ✓ key to adopt the measuring result.
 - ⇒ The measuring results are displayed.
 - ⇒ When activated, **BMI** or **BSA** (here: **BMI**) are automatically calculated and displayed.



10. You have the following options for continuing:

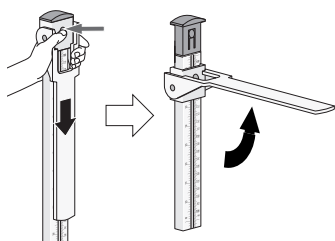
- ▶ Stand-alone devices: Enter measured result in the patient file manually
- ▶ Devices with a network connection: Complete the measurement: → [Completing the measurement, page 47](#)

11. Ask the patient to step off the weighing platform.

12. Push the upper telescopic element into its lowest position.

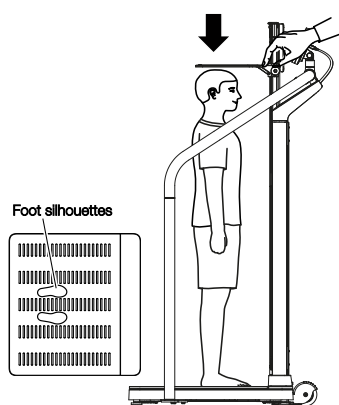
13. Fold down the measuring flap.

Measuring heights < 1.22 m



- ✓ There is no load on the weighing platform
- ✓ The upper telescopic element is pushed all the way in
- ✓ The measuring flap is folded down

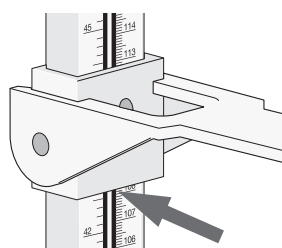
1. Release the head slide by pressing on the latch and move the head slide down onto the lower telescopic element.
2. Fold up the measuring flap until it engages in a horizontal position.



3. Ask the patient to stand under the measuring flap and to adopt the position below:

- ▶ Face towards the column of the device
- ▶ Upright posture: Back and head straight

4. Push the head slide down until the measuring flap is in contact with the patient's head.



5. Read off the measuring result under the head slide as shown in the illustration.

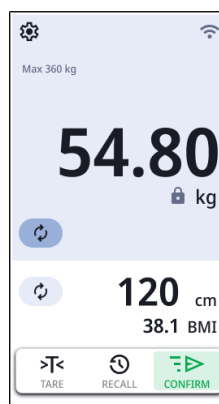
6. Press the **Height** button.

7. Press the **< 120 cm** key.

8. Enter the measuring result manually.



9. Press the ✓ key to adopt the measuring result.
⇒ The measuring results are displayed.
⇒ When activated, **BMI** or **BSA** (here: **BMI**) are automatically calculated and displayed.

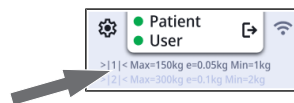


10. You have the following options for continuing:
- ▶ Stand-alone devices: Enter measured result in the patient file manually
 - ▶ Devices with a network connection: Enter the measuring result in the multifunctional display (→ [Entering height manually, page 34](#)) and complete the measurement (→ [Completing the measurement, page 47](#))
11. Ask the patient to step off the weighing platform.
12. Fold down the measuring flap.
13. Push up the head slide until it engages in the lock.

6.6 Using extended weighing functions

Switching weighing range

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

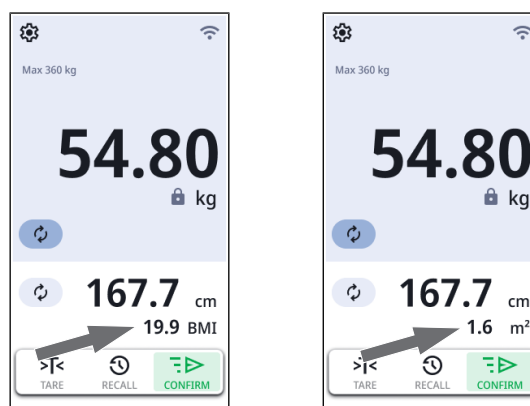


- To switch back to weighing range 1, completely remove the weight from the scale.
⇒ Weighing range 1 is active again.

Automatic calculation of BMI or BSA

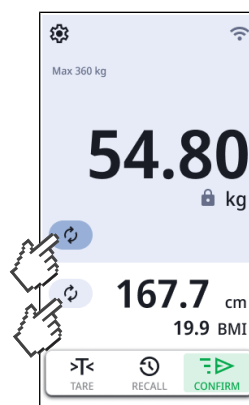
The device automatically calculates the Body Mass Index (**BMI**) or Body Surface Area (**BSA**:) depending on the default setting (→ [Selecting BMI/BSA, page 61](#)).

- Determine the patient's weight and height as described in these instructions for use.
⇒ Depending on the default setting, the device calculates either the **BMI** or **BSA** and displays the result:



Repeating a measurement

You can repeat measurements while the patient is still standing on the weighing platform.



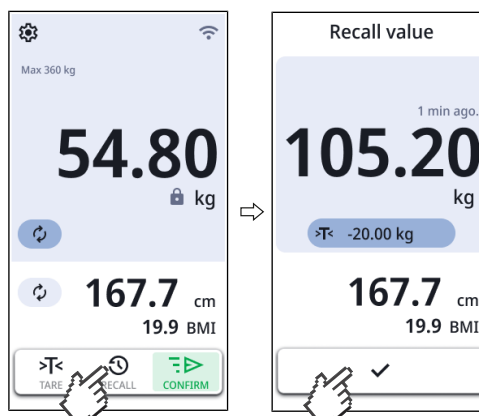
- Press the  symbol.
⇒ The measurement is repeated.

NOTE

Repeating a height measurement is possible only in conjunction with an ultrasonic measuring rod.

Displaying the last weight measured

1. Press the  symbol.
⇒ The last weight value measured is displayed (example with additional weight and BMI):



2. To close the display, press the  symbol.

Weighing babies/toddlers

The **Mother/Child** function can be used to determine the weight of babies and toddlers. To do this, the child is held in the arms of an accompanying adult during weighing.



WARNING!

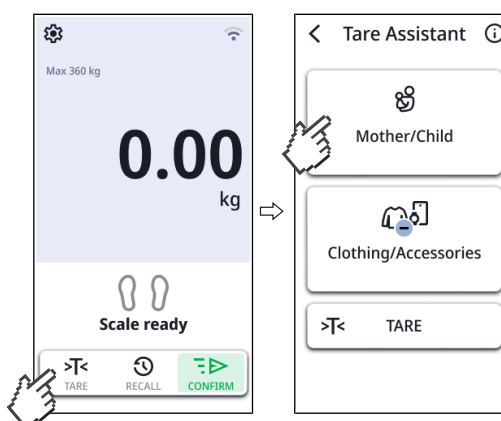
Faulty measurement as a result of initial weight changing

If the child is weighed together with a different adult, it will not be possible to determine the child's weight correctly.

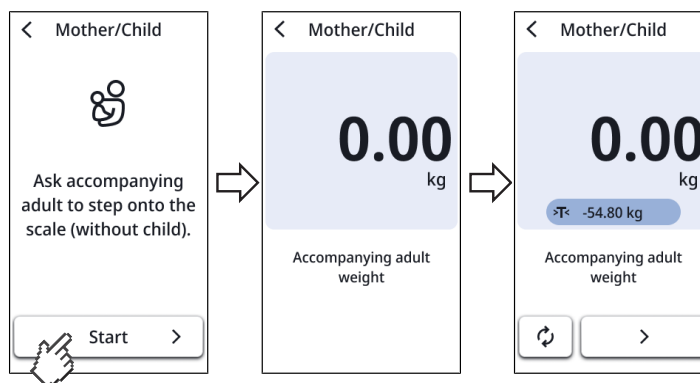
- Ensure that the child is always weighed with the adult with whom the initial weight was determined.
- Ensure that the adult's weight does not change - as a result of their taking off a piece of clothing, for example.

✓ The scale has no load.

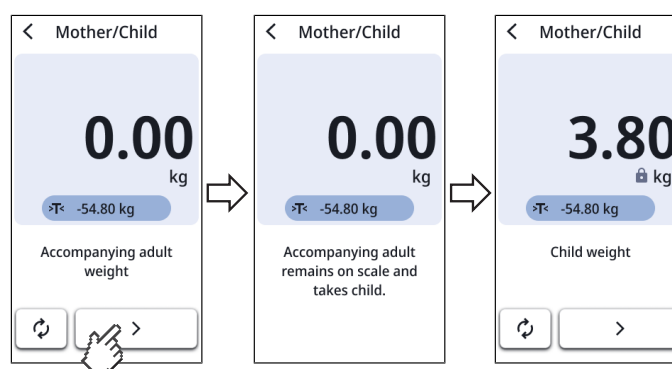
1. Press the  button.
⇒ The **Tare Assistant** menu is displayed.



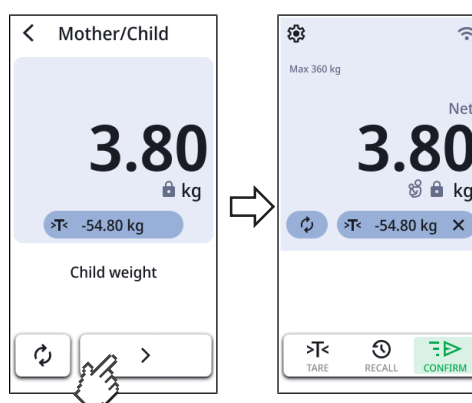
2. Press the **Mother/Child** button.
3. Ask the accompanying adult to step onto the weighing platform.
⇒ The weight of the accompanying adult is displayed.



4. Wait until a stable weight value ( symbol) is displayed.
 ⇒ The weight of the accompanying adult is saved as the initial weight and displayed in the tare bar (here:  54.85 kg).
 ⇒ The display shows **0.00**.
5. Ask the accompanying adult to remain on the weighing platform.
6. Ask the accompanying adult to take the child.



7. Press the  button.
8. Wait until a stable weight value ( symbol) is displayed for the child.



9. Press the  button.
 ⇒ The  symbol is displayed.
 ⇒ If your device is connected to an EMR system, you can now send the data.

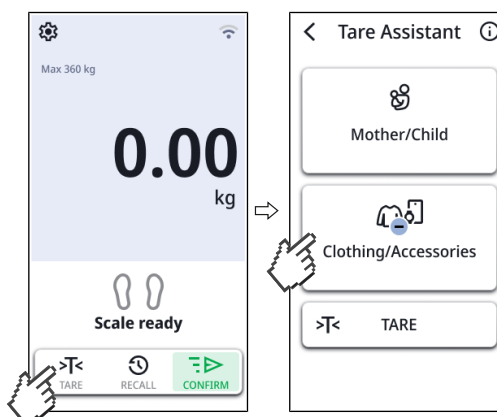
Taring off clothing/ accessories

10. To deactivate the function, press the **X** key in the tare bar.

Use the **Clothes/Accessoires (Clothing/Accessories)** function to prevent heavy clothing or accessories from affecting the measuring result.

✓ The scale has no load.

1. Press the **>T<** button.
⇒ The **Tare Assistant** menu is displayed.



2. Press the **Clothes/Accessoires (Clothing/Accessories)** button.

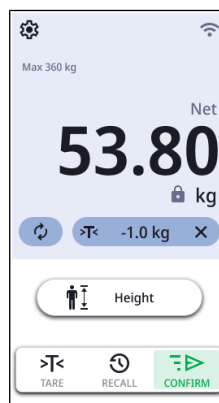
NOTE

If a pre-tare value was defined for this device (**Settings \ Weight \ Pre-tare**), the pre-tare value will be displayed. You can use this value unchanged or adjust it for the current measurement.

3. Press the **-** or **+** key to enter/adjust a weight value (clothing, watch, mobile phone, etc.).



4. Press the **✓** key.
⇒ The tare value is adopted and displayed in the tare bar (**>T<**).
⇒ The display shows **0.00**.
5. Ask the patient to step onto the weighing platform.
6. Wait until a stable weight value (**🔒** symbol) is displayed.



- ⇒ The tare weight is automatically deducted.
- ⇒ If your device is connected to an EMR system, you can now send the data.

7. To deactivate the function, press the **X** key in the tare bar.

Taring off additional weight

Use the **TARE** function to prevent an additional weight (e.g. a towel) from affecting the patient's weight value.

NOTICE!

Faulty measurement as a result of force shunt

If an additional weight (e.g. a large towel) contacts the surface on which the scale is placed, the weight will not be measured correctly.

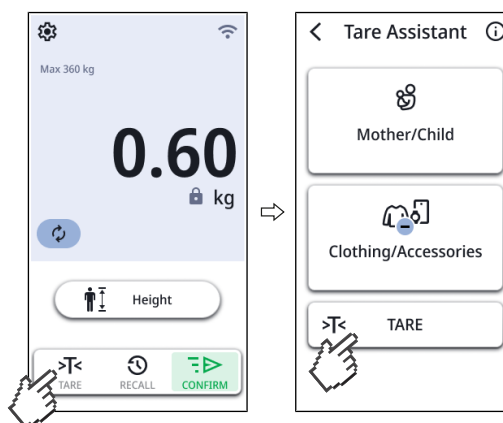
- Make sure that additional weights are only placed on the scale's weighing platform.

✓ The scale has no load.

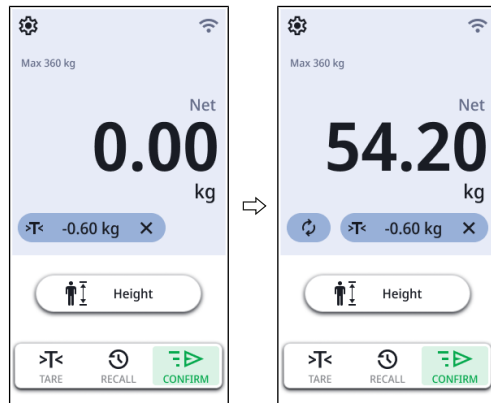
1. Place the additional weight on the weighing platform.

2. Press the **>T<** button.

- ⇒ The **Tare Assistant** menu is displayed.



3. In the **Tare Assistant** menu, press the **>T<** button.
4. Wait until the value **0.00** and the **NET** message are displayed.
5. Ask the patient to step onto the scale.
 - ⇒ The patient's weight is displayed.
 - ⇒ The saved additional weight has been deducted automatically.



6. Read off the measuring result.

7. To delete the additional weight, press the **X** symbol.

⇒ The additional weight is no longer displayed.

⇒ The function is deactivated.

Recording additional weight via barcode

You can scan an additional weight with a barcode scanner and have it automatically deducted from a measuring result, e.g. weight of a forearm crutch.

NOTE

For administrators or hospital technicians

Information on how to generate a barcode with e.g. the weight of a forearm crutch is available here: → [Generating barcodes for "Tare-By-Scanning", page 61](#).



WARNING!

Faulty measurement

If you use the barcode scanner to scan multiple additional weights, they will be added up.

In addition to the weights scanned by barcode scanner, the device also deducts the set pre-tare value.

► To determine the patient's weight correctly, always check how many additional weights have been entered.

✓ The weighing platform has no load.

✓ A barcode scanner is connected → [Connecting a barcode scanner \(optional\), page 26](#)

1. Scan the barcode of the additional weight.



⇒ The weight of the forearm crutch is displayed (here: 0.6 kg).

2. Ask the patient to step onto the scale.
 - ⇒ The patient's weight is displayed (here: 54.2 kg).
 - ⇒ The additional weight is deducted automatically (here: 0.6 kg).
3. To delete the additional weight, press the **X** symbol.
 - ⇒ The additional weight is no longer displayed.
 - ⇒ The function is deactivated.

6.7 Completing the measurement

Devices with connection to an EMR system



CAUTION!

Incorrect assignment of measuring results

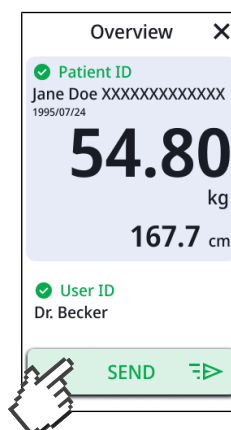
Manual entries in the electronic patient file are susceptible to error.

- ▶ Enter the patient ID using a barcode scanner to automatically transmit the measuring results to the EMR system.

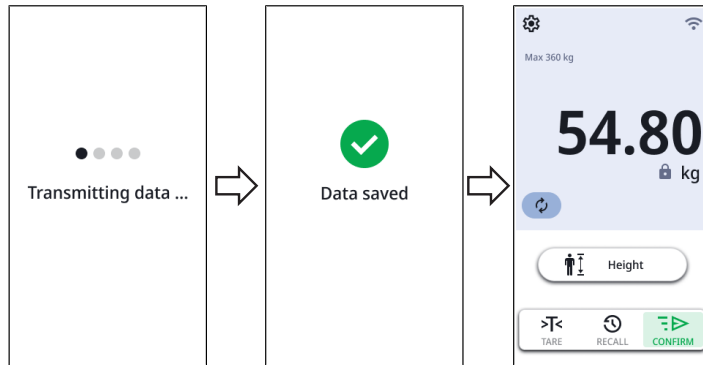
NOTE

Whether IDs have to be scanned and at what point during the measurement is defined when connecting the device to your EMR System. If you have any queries in this regard, contact your administrator or hospital technician.

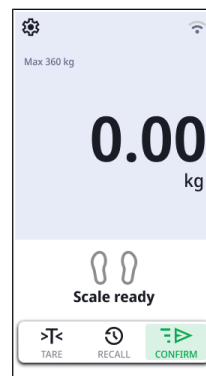
1. Make sure that the displayed measured values are plausible.
2. Press the  button.
3. Scan the patient and/or user ID.
 - ⇒ The device indicates whether the scanned IDs are correct:



4. Press the  button.
 - ⇒ The measuring results are submitted to the EMR System and are assigned to the electronic patient file.



5. Ask the patient to step off the weighing platform.

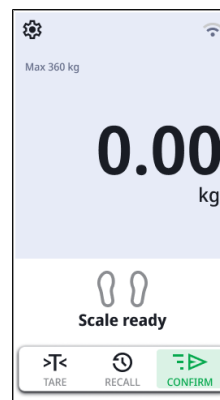


⇒ The device is ready for the next measurement.

Stand-alone operation

To complete a measurement procedure on devices that are not connected to an EMR system, proceed as follows:

1. Make sure that the displayed measured values are plausible.
2. Transfer the displayed measured values to the patient file manually.
3. Ask the patient to step off the weighing platform.



⇒ Measured values and manual entries are discarded.

⇒ The device is ready for the next measurement.

6.8 Using “self-measurement”

In **Self-Measurement** mode, patients can determine their weight and height themselves. Here patients are guided through the measurement procedure by the device with acoustic and visual instructions. To use this function, seca recommends connecting the device to an EMR system.



WARNING!

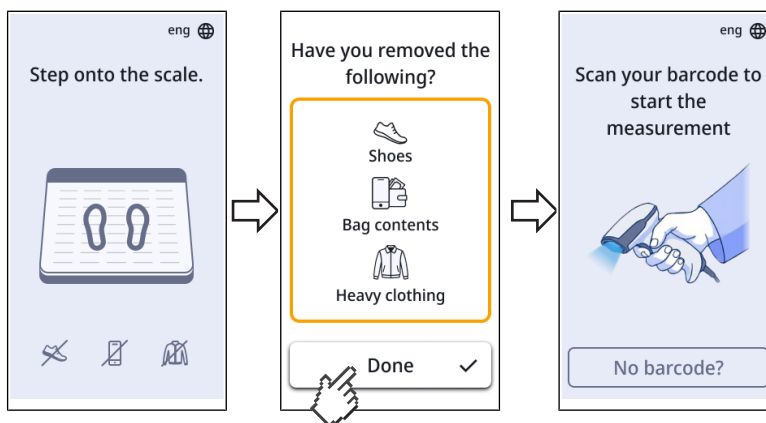
Stand-alone operation: Incorrect assignment of measuring results

If measuring results are assigned to the wrong patient or become lost, this will lead to misinterpretations and consequently to misdiagnoses.

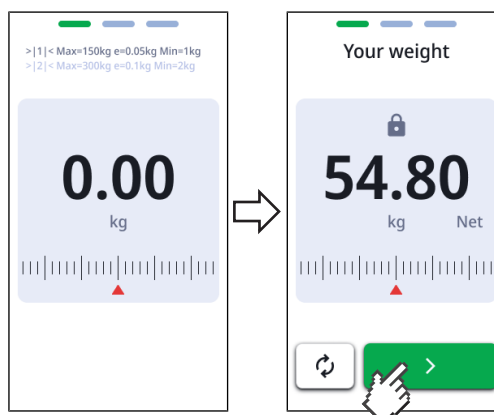
- Use self-measurement in stand-alone operation only when direct contact between the patient and medical personnel is guaranteed.
- Make sure that the measured values displayed are plausible and are transferred to the right patient file.

If your patient is using this function for the first time, you should assist them as follows:

- ✓ The device is connected to an EMR system (recommended)
 - ✓ The device is connected to the network via LAN (recommended)
 - ✓ **Self-Measurement** mode is activated.
 - ✓ The weighing platform has no load.
 - ✓ The patient's ID is available as a barcode.
1. Ask the patient to step onto the scale.
 - ⇒ The patient is asked to remove heavy clothing, watches or mobile phones.
 2. As soon as these objects have been removed, ask the patient to confirm the relevant message with the **Done** key.
 - ⇒ When connected to an EMR system: The patient is asked to scan their ID (barcode).
 3. Ask the patient to scan their ID.
 - ⇒ The measurement procedure starts.



4. Ask the patient to stand still.
5. Ask the patient to wait until a stable weight value ( symbol) is displayed.
6. Ask the patient to press the  key.



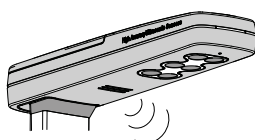
⇒ The device then switches to height measurement.

NOTE

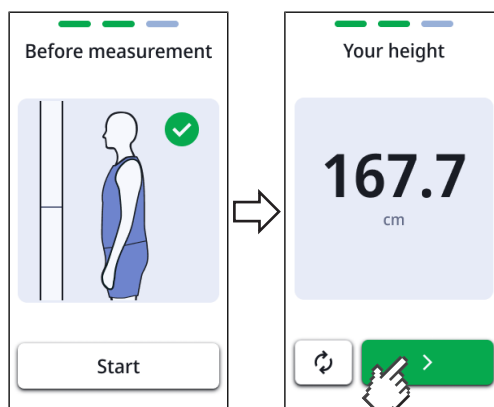
If the device is configured so that only weight measurement is required, height measurement will be omitted. The device directly displays the overview of results.

7. Make sure that the patient's posture is correct:

- ▶ Face towards the column of the device
- ▶ Feet on the illuminated foot silhouettes
- ▶ Upright posture: Back and head straight

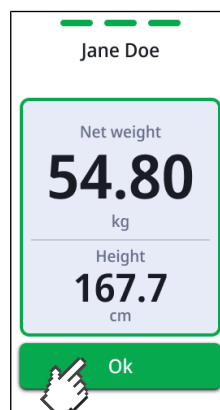


8. Ask the patient to press the **Start** key.
9. Ask the patient to stand up straight and not move.
10. Ask the patient to wait until their height is displayed/announced.



11. Ask the patient to press the **>** key.

⇒ The measuring results for weight and height are displayed/announced.



12. Ask the patient to press the **Finish (Ok)** key.
 - ⇒ When connected to an EMR system: The measuring results continue to be displayed on the device and automatically transferred to the electronic patient file.
 - ⇒ With stand-alone operation: The measuring results continue to be displayed on the device.
13. Ask the patient to step off the weighing platform.
 - ⇒ The measured values are discarded.
 - ⇒ The device is ready for the next measurement.

7 CONFIGURATION

NOTE

- The functions described in this part of the instructions for use are intended exclusively for administrators and hospital technicians.
- This part of the user documentation contains information about configuring the device for measuring mode and for integrating it into a PC network.

NOTICE!

Integrating this device into a PC network containing other devices may lead to previously unknown risks for patients, operators or third parties.

- It is the responsibility of the operating company to determine, analyze, rate, and manage these risks.

7.1 Basic functions

Changing measurement mode

To change the device's measurement mode, it is necessary to restart the device.

1. Start the device again → [Restarting the device, page 77](#).
 - ⇒ Mode selection is displayed.
 - ⇒ You have the following selection options:

Mode	Display
Guided Measurement → Operation, page 31	
Self-Measurement → Using "self-measurement", page 49	

NOTE

The **Self-Measurement** measurement mode is not available for the combinations of devices with the **seca 254** telescopic measuring rod and/or the **seca 453** battery pack.

2. Press the desired mode.
 - ⇒ The device switches to the selected mode and is ready for operation.

Calling up/exiting a menu

NOTE

The menu can be called up only in **Guided Measurement** measurement mode. If the device is in **Self-Measurement** measurement mode, the device must be briefly de-energized (pull out device connector and plug in again). It is then possible to change measurement mode.

1. To call up the menu, press the  key.
2. To exit the menu, press the  key.
⇒ The main screen is displayed.

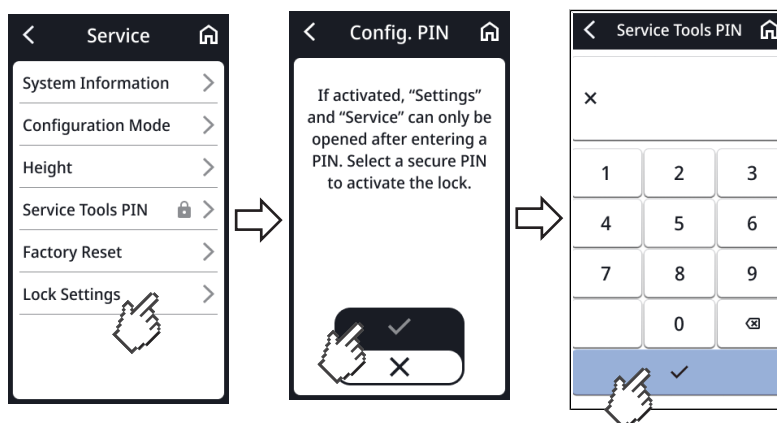
NOTE

The setting options available in the menu depend on the product variant/combination of products being used. The menu of your device may have a smaller scope than that shown in these instructions for use.

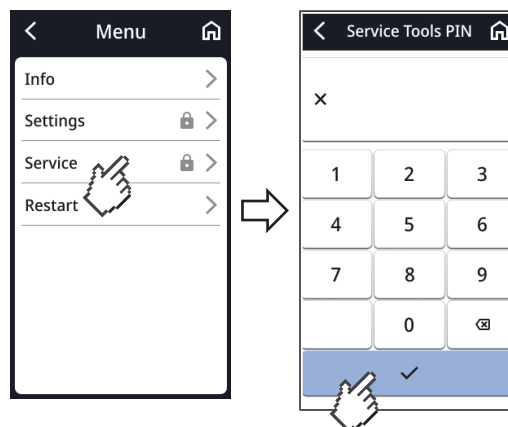
Protecting Settings and Service with a PIN

You can set up a PIN for the **Settings** and **Service** menu items.

1. Press the  symbol.
⇒ The menu is displayed.
2. Select **Service** > **Lock Settings**.

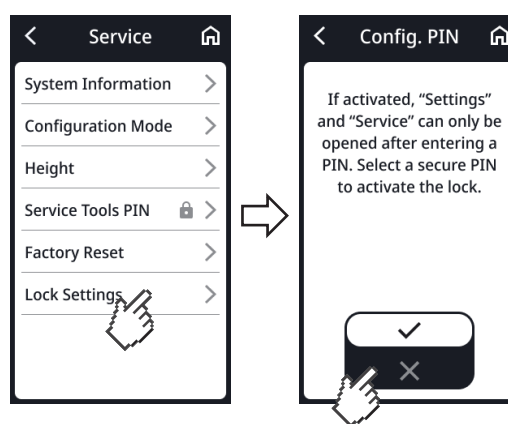


3. Enter the desired PIN.
 4. To confirm your entry, press the  button.
⇒ The PIN is stored.
⇒ **Settings** and **Service** are stored with the PIN.
 5. To exit the menu, press the  symbol.
- To deactivate the PIN, proceed as follows:
6. Press **Service** in the menu.
 7. Enter the PIN.



8. Press **Lock Settings**.

9. Press the **X** button.



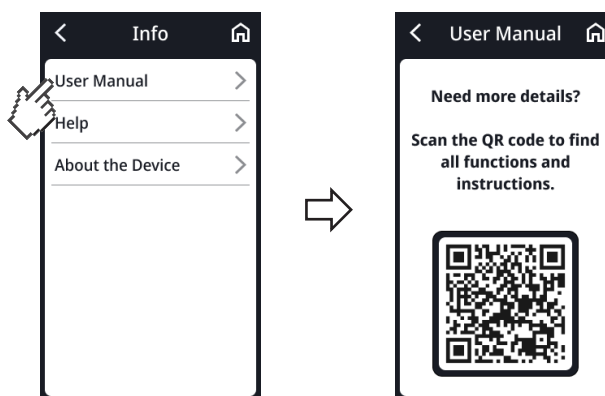
⇒ **Settings** and **Service** are no longer stored with a PIN.

Using the PDF version of the instructions for use (QR code)

You can scan a QR code which can be used to access the PDF version of these instructions for use and load them e.g. onto your smartphone or tablet PC.

To scan the QR code, proceed as follows:

1. Press the  symbol.
⇒ The menu is displayed.
2. Press **Info**.
3. Press **User manual**.
⇒ A QR code is displayed.

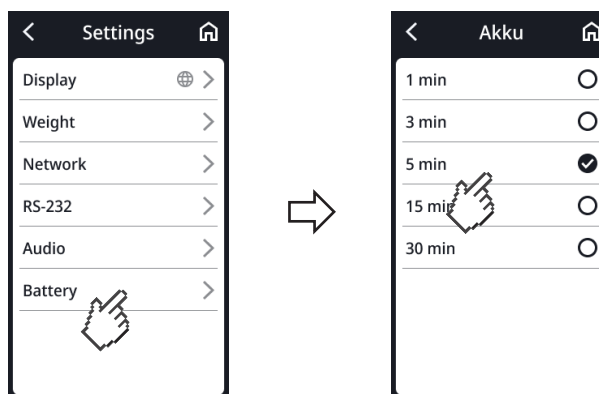


4. Scan the QR code (e.g. with your smartphone or tablet).
⇒ This takes you to the www.seca.com/support website where you can download the instructions for use.
5. To exit the menu, press the  symbol.

Setting the time period for automatic switch-off, battery pack mode only

If your device is equipped with the **seca 453** battery pack, you can adapt the time period after which the device switches off automatically (factory setting: 5 minutes):

1. Press the  key.
⇒ The menu is displayed.
2. Select **Settings > Battery (Battery Pack)**.
3. Press the time period after which the device is to switch off automatically (here: 5 minutes)



4. To exit the menu, press the  key.

7.2 Measuring

Activating the Autohold function (stand-alone operation only)

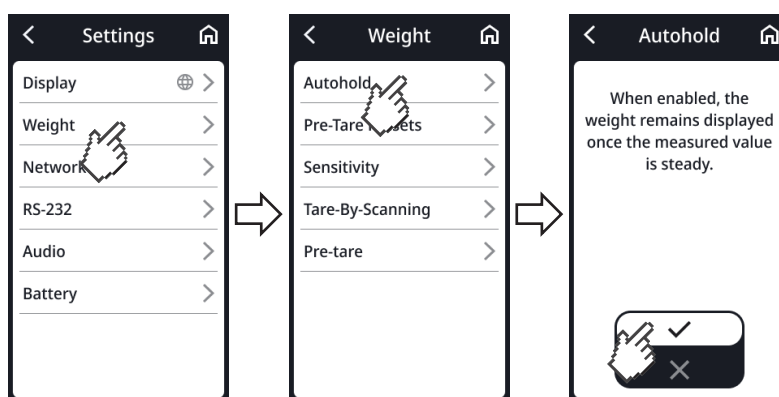
When the **Autohold** function is activated, the measuring result will be continuously displayed as soon as a stable weight value is achieved.

On devices with a measuring rod the setting also applies to the display of height.

NOTE

If the device is connected to an EMR system, this function is activated automatically and cannot be deactivated.

1. Press the  key.
⇒ The menu is displayed.
2. Select **Settings > Weight**.
3. Press **Autohold**.
4. Select the desired setting:



5. To exit the menu, press the  key.

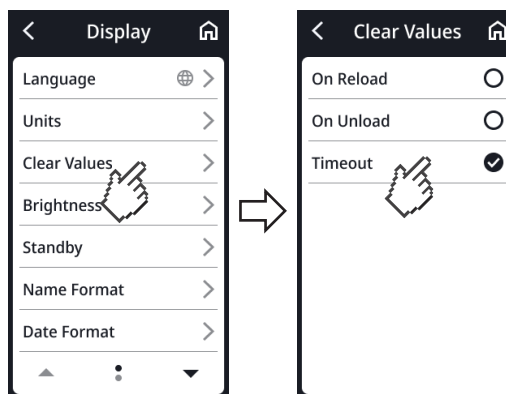
Setting the Autohold function (stand-alone operation only)

You can set how long the weight is displayed after the patient has left the weighing platform.

The setting options are available under the following conditions:

- ✓ Stand-alone operation (without integration in a PC network).
- ✓ **Autohold** is activated (→ [Activating the Autohold function \(stand-alone operation only\)](#), page 56)

1. Press the  symbol.
⇒ The menu is displayed.
2. Select **Settings > Display > Clear Values**.
⇒ You have the following setting options:
 - **On Reload:** Values are deleted when a new load is placed on the weighing platform
 - **On Unload:** Values are deleted as soon as the load is removed from the weighing platform
 - **Set Timeout:** The values will be cleared after an individually set period of time
3. Press the desired setting.
⇒ The setting is active.



Saving/deleting the pre-tare value

4. To exit the menu, press the  symbol.

You can define a pre-tare value that is automatically deducted from the measuring result with each measurement.

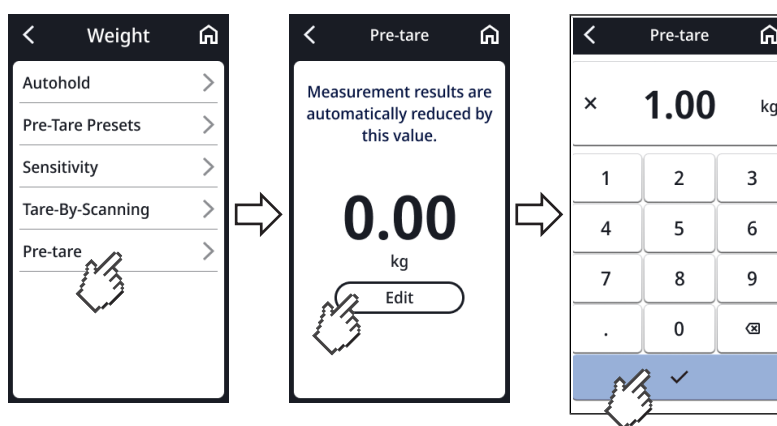


WARNING! **Incorrect measuring results**

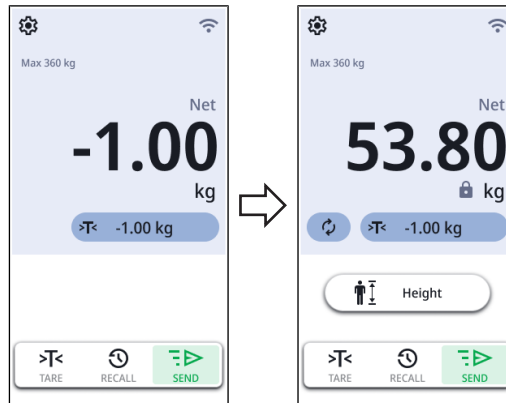
Saved pre-tare values are added up with further tare values (**Mother/Child, Tare-By-Scanning**) and deducted from the measuring result as a total value.

- Before saving a measuring result, make sure that the total value shown in the tare bar is plausible.

1. Press the  symbol.
⇒ The menu is displayed.
2. Select **Settings > Weight > Pre-tare**.
3. Press **Edit**.



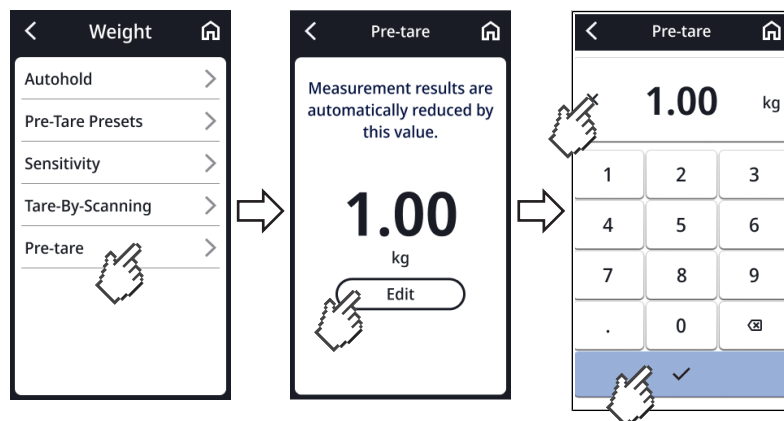
4. Enter the desired value.
5. To confirm the value, press the  key.
⇒ The value is saved.
6. To exit the menu, press the  symbol.



- ⇒ The saved value is displayed on the main screen with a minus sign in front of it
- ⇒ The value is automatically deducted from the measuring result.
- ⇒ The value is used as a default value for the **Clothes/Accessoires (Clothing/Accessories)** function and can be adjusted for the individual measurement procedure.

Deleting the pre-tare value

1. Select **Settings > Weight > Pre-tare**.



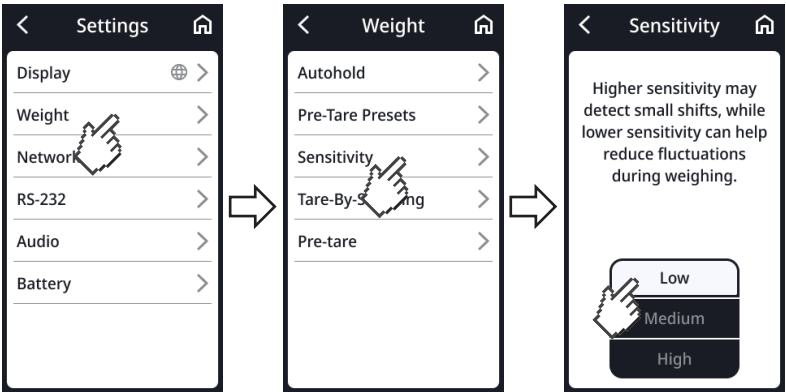
2. Press **Edit**.
 3. Press the **X** button.
 4. To confirm your selection, press the **✓** key.
- ⇒ The pre-tare value is deleted.

Setting filter

The **Filter** function can be used to avoid interference during weight determination. The selected setting has the following effects on measurement procedures if the **Autohold** function is activated:

- Sensitivity with which the weight display reacts to patient movements
- Time period until a weight value is displayed permanently

1. Press the  key.
⇒ The menu is displayed.
2. Select **Settings > Weight > Sensitivity**
3. Select the desired setting:



Settings	Weight determination
Low	Fast
Medium	Medium
High	Slow

4. To exit the menu, press the  key.

NOTE

With the **Low** setting and patients who are not very steady on their feet, it is possible that no weight value will be displayed permanently despite the **Autohold** function being activated.

Calibrating ultrasonic measuring rod

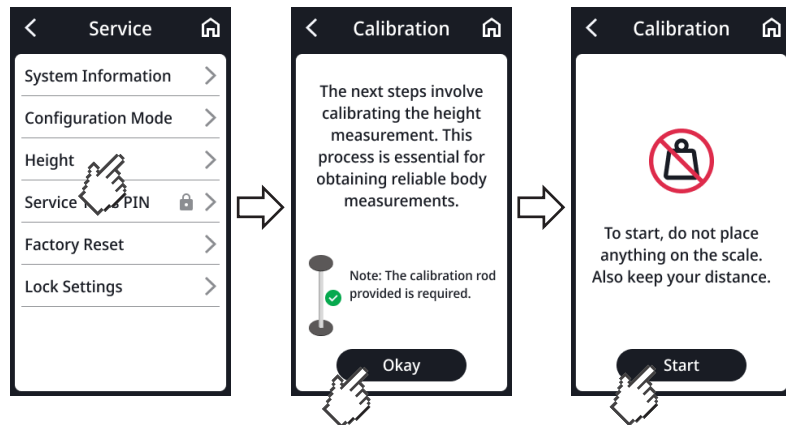
Before performing a measurement with the device for the first time, height measurement must be calibrated.

The automated calibration procedure consists of two steps:

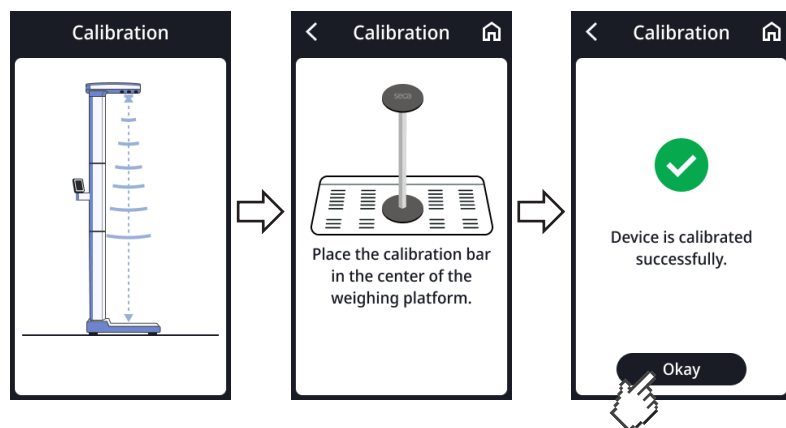
- Calibration over the entire measuring range
- Calibration with a calibration rod (included in the scope of delivery of the measuring rod).

- ✓ There is no load on the weighing platform
- ✓ Power LED on ultrasound head is illuminated
- ✓ Silhouettes on the weighing platform are illuminated
- ✓ No objects or people in the immediate vicinity of the device (distance approx. 0.5 m)

1. Press the  key.
 - ⇒ The menu is displayed.
 - ⇒ Select **Settings > Service > Height**.
 - ⇒ The **Calibration** dialog is displayed:
2. Keep the calibration rod supplied ready.
3. Press the **Ok** key.
4. Make sure that there is no load on the weighing platform.
5. Press the **Start** key.



6. Step back from the measuring device (distance approx. 0.5 m).
⇒ Calibration is performed over the entire measuring range.
7. Wait until the device tells you to place the calibration rod in the center of the weighing platform.

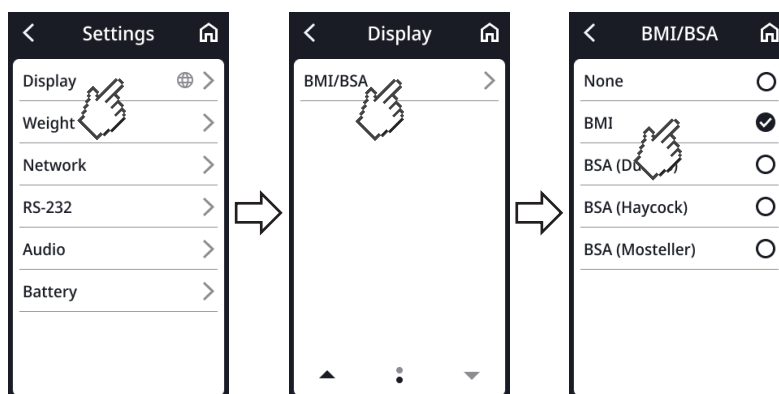


8. Place the calibration rod in the center of the illuminated foot silhouettes of the weighing platform.
9. Step back from the measuring device (distance approx. 0.5 m).
⇒ The second step of the calibration procedure starts.
10. Wait until the second part of the calibration procedure has been completed.
11. Press the **OK** key.
⇒ The main screen is displayed again.
12. Remove the calibration rod from the weighing platform.
⇒ The device is ready to measure.

Selecting BMI/BSA

You can specify whether the device calculates Body Mass Index (**BMI**) or Body Surface Area (**BSA**) as soon as the patient's weight and height are available.

1. Press the  key.
⇒ The menu is displayed.
2. Select **Settings** > **Display**.
3. Press the  or  key until **BMI/BSA** is displayed.
4. Select the desired setting:

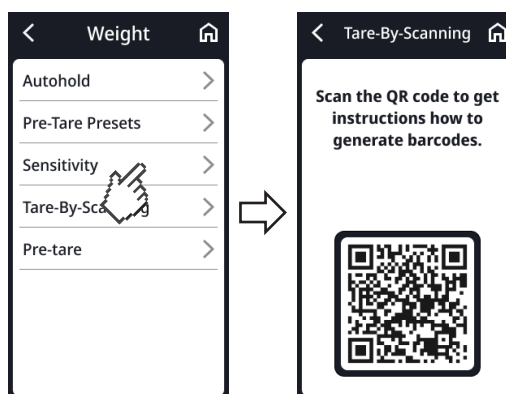


5. To exit the menu, press the  key.

Generating barcodes for "Tare-By-Scanning"

In the **Tare-By-Scanning** menu item you can find information on how to generate barcodes for auxiliary material (e.g. forearm crutch). You can scan an additional weight with the barcodes (→ [Recording additional weight via barcode, page 46](#)).

1. Press the  symbol.
⇒ The menu is displayed.
2. Select **Settings** > **Weight** > **Tare-By-Scanning**.
⇒ A QR code is displayed.

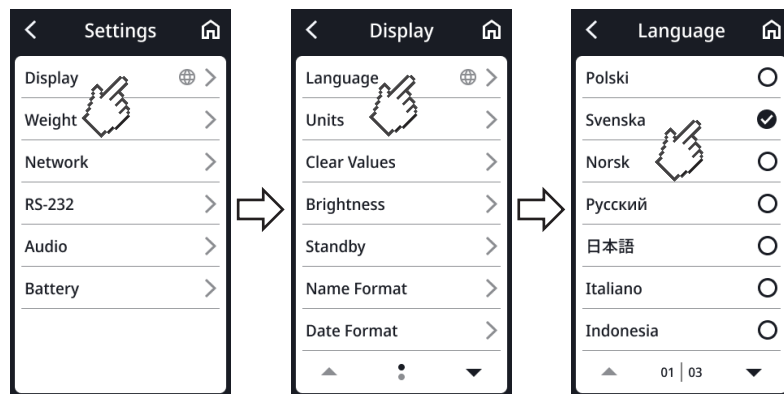


3. Scan the QR code (e.g. with your smartphone or tablet).
⇒ You will be taken to a website: www.seca.com/tare-by-scanning-generator. There you will find information on how to generate barcodes.
4. To exit the menu, press the  symbol.

7.3 Adjusting display settings

Setting display language The display language can be set.

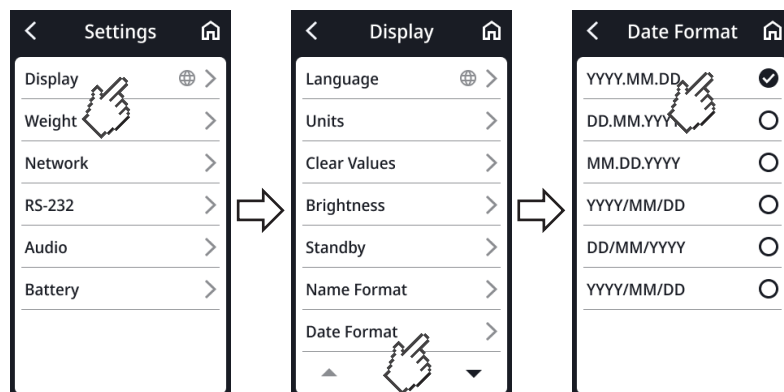
1. Press the  key.
⇒ The menu is displayed.
2. Select **Settings > Display > Language**.
3. Select the desired setting:



4. To exit the menu, press the  key.

Setting the date format You can set the date format.

1. Press the  key.
⇒ The menu is displayed.
2. Select **Settings > Display > Date format**.
3. Select the desired setting:

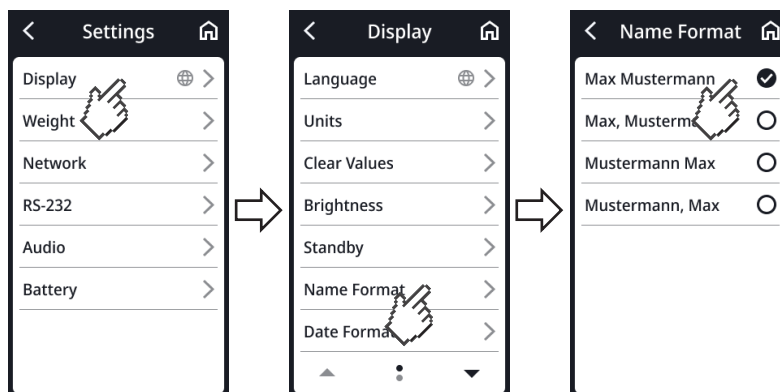


4. To exit the menu, press the  key.

Setting the name format

You can set the name format.

1. Press the  key.
⇒ The menu is displayed.
2. Select **Settings > Display > Name format**.
3. Select the desired setting:



4. To exit the menu, press the  key.

Setting standby time

The time period after which the multifunctional display goes to standby mode can be set.

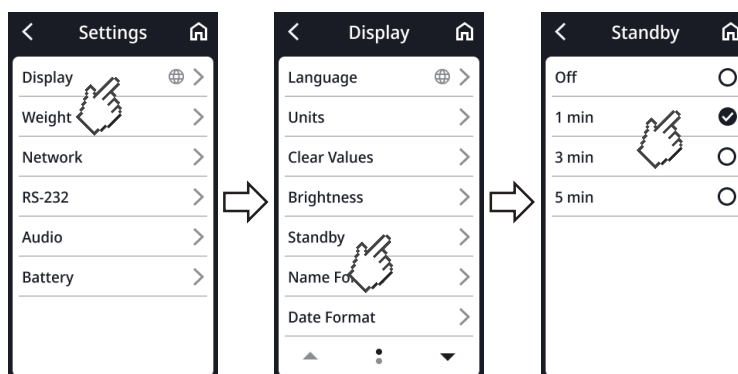


WARNING! Electric shock

The device is not de-energized when the display goes off.

- The device is not equipped with an on/off switch. Remove the power supply connector if the device needs to be de-energized, e.g. for hygiene treatment or maintenance work.

1. Press the  key.
⇒ The menu is displayed.
2. Select **Settings > Display > Standby**.
3. Select the desired setting:



NOTE

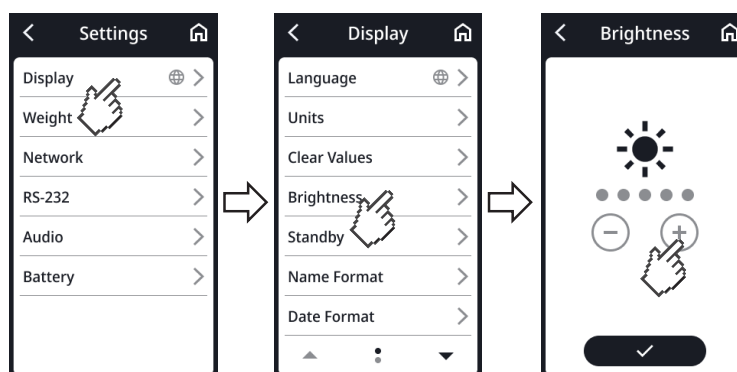
If the **Off** setting is selected in the **Standby** menu, the multifunctional display remains permanently active.

4. To exit the menu, press the  key.

Setting the display brightness

The display language can be set.

1. Press the  key.
⇒ The menu is displayed.
2. Select **Settings > Display > Brightness**.
3. Select the desired setting:



4. Press the  key.
⇒ The setting is active.
5. To exit the menu, press the  key.

Switching units



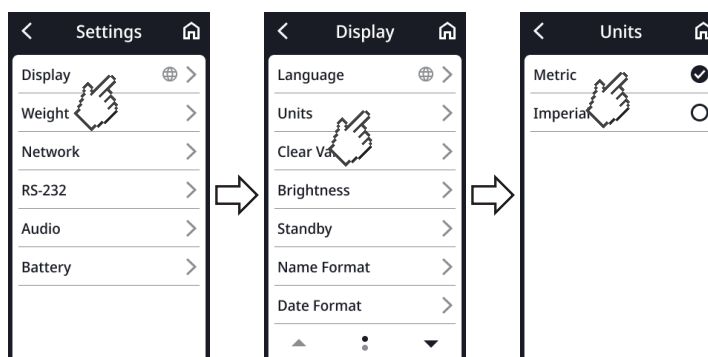
CAUTION!

Patient hazard

To prevent misinterpretations, measuring results for medical purposes must only be displayed and used in SI units (kilograms/grams, meters/centimeters). Some devices have the option of displaying measuring results in different units. This is purely an additional function.

- Only use the measuring results in SI units.
- You as the user take sole responsibility for the use of measuring results in non-SI units.

1. Press the  key.
⇒ The menu is displayed.
2. Select **Settings > Display > Units**.
3. Select the desired setting:



4. To exit the menu, press the  key.

7.4 Setting up network functions



CAUTION!

Malfunction, implausible measured results

If network settings are not carried out correctly, measured results may be assigned incorrectly or lost.

- Have the steps described in this section carried out by your administrator or hospital technician. If you have any questions, contact seca Service.

NOTE

As soon as the device is connected to a network, the **Autohold** function is activated automatically. The **Autohold** function cannot be deactivated as long as the device is connected to a network.

You can connect the device to an EMR system. Use the connection to assign the measured values to an electronic patient file. The following conditions must be met:

- Device is set up in the **seca connect 103** software.
- Device is connected to your network via a LAN or WiFi connection.
- An interface to your EMR system is set up in the **seca connect 103** software.
- A barcode scanner is connected to the device.

On connection to an EMR system, the measurement procedure consists of the following steps:

- Record ID(s) using the barcode scanner
- Record measured values on the device
- Use the **seca connect 103** software to transmit measuring results to the EMR system

NOTE

The measurement procedure (workflow settings) can be individually adapted in the **seca connect 103** software.

Setting up the device in the **seca connect 103** software

For data transmission between the device and your EMR system, the device must be set up in the **seca connect 103** software. Amongst other things, the following data must be entered:

- Device name
 - Setup location
 - Measurement procedure (workflow settings)
 - IP address or server name (DNS) of the **seca connect 103** server
 - Network port
1. Set up the device in the **seca connect 103** software as described in the **seca 103/452** system instructions for use.
⇒ The software generates a QR code containing the entered information.
 2. Make sure that a barcode scanner is connected to the device (→ [Connecting a barcode scanner \(optional\)](#), page 26).
 3. Scan the QR code from the software user interface or from a paper printout.
⇒ The settings carried out in the **seca connect 103** software are stored in the device.

4. You have the following options for continuing:

- ▶ LAN: Connect the device to the network using a LAN cable
- ▶ WiFi connection via **seca connect 103**: → [Setting up network functions, page 65](#)

NOTICE!

Malfunction

To be able to transmit measuring results to an EMR System, an interface must be set up between the **seca connect 103** software and the EMR system.

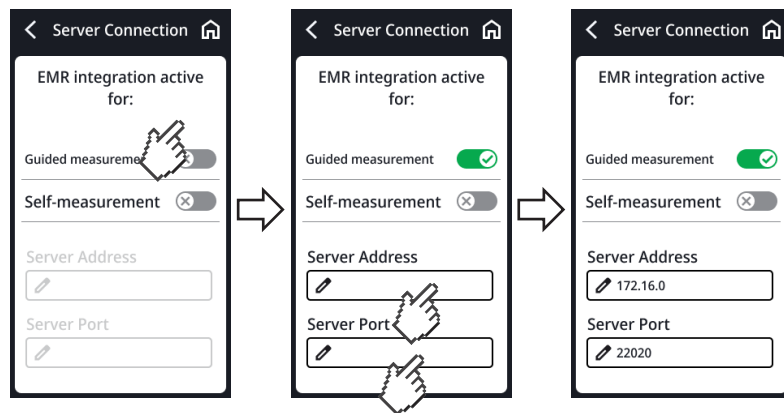
- ▶ Observe the **seca 103/452** system instructions for use.
- ▶ Set up the interface in cooperation with the manufacturer of your EMR system.

Entering the server address

In order to be able to use network functions, the device must be connected to the following server:

- **seca connect 103**: Local server on which the **seca connect 103** software is installed.

1. Press the  symbol.
⇒ The menu is displayed.
2. Select **Settings > Network > Server Connection**.
3. Specify for which measurement mode the server connection is to be active (here: **Guided Measurement**)
4. Enter the server address and server port:
 - a) Enter the value
 - b) Confirm your entry by pressing the  key



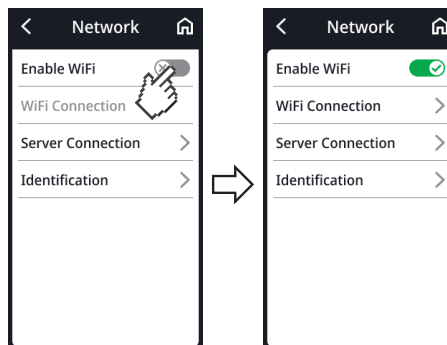
5. You have the following options for continuing:

- ▶ LAN: Connect the device to the network using a LAN cable
- ▶ WiFi connection via **seca connect 103**: → [Setting up network functions, page 65](#)

Activating/deactivating the WiFi function

To activate/deactivate the WiFi function for the device, proceed as follows:

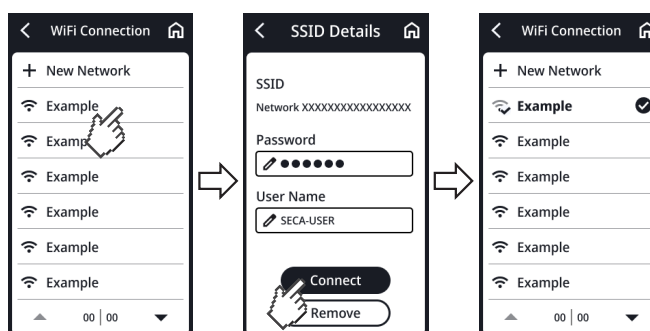
1. Press the  symbol.
⇒ The menu is displayed.
2. Select **Settings > Network**.
⇒ The current setting is displayed (here: WiFi deactivated):



3. Press the **Enable WiFi** item.
⇒ The setting is active.
4. To exit the menu, press the  key.

Connecting the device to a WiFi network

1. Make sure that there is no LAN connection – if there is one, disconnect the LAN cable from the device.
2. Ensure that the WiFi function of the device is activated → [Connecting the device to a WiFi network, page 67](#).
3. Press the  symbol.
⇒ The menu is displayed.
4. Select **Settings > Network > WiFi Connection**.
⇒ The device searches for available WiFi networks. This may take a moment.
5. You have the following options for continuing:
 - Search for network automatically (recommended and described below)
 - Integrate device in a WiFi network manually
6. Press the network you wish to use (here: “Example”).
7. Enter the user name and password for the WiFi network.
8. Press the **Connect** key.

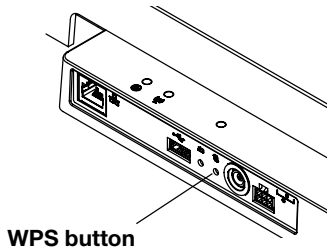


⇒ The device connects to the router of the WiFi network.

⇒ As soon as the device is connected to the WiFi network, the  symbol is displayed.

9. To exit the menu, press the  key.

Connecting the device to a WiFi network (WPS)



Automatically clearing measured values

Connect your device to the WiFi network via WPS if no barcode scanner is connected to the device and you have access to the router.

1. Make sure that the WiFi function of the device is activated → [Activating/deactivating the WiFi function, page 67](#).
2. Press the WPS button on the router and on the connection panel of the weighing platform.
 - ⇒ The device connects to the router of the WiFi network.
 - ⇒ As soon as the device is connected to the WiFi network, the symbol is permanently on.

NOTICE!

Malfunction, incomplete data transmission

Further settings must be made to enable measurement data to be transmitted to an EMR System via the **seca connect 103** software.

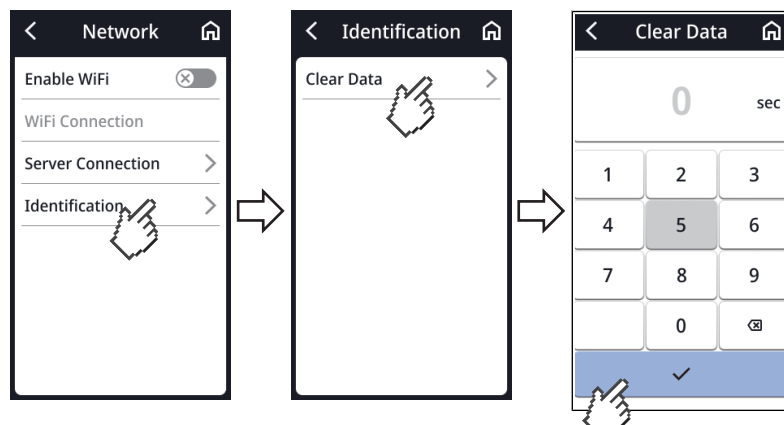
► Observe the **seca 103/452** system instructions for use.

To ensure data security, you can set how long patient data (ID, weight, height, etc.) will be displayed. Besides, out-of-date measuring results and patient data can lead to incorrect calculation of BMI or BSA.

The period of time after which the following parameters are cleared automatically can be set:

- Weight
- Height
- **BMI**
- **BSA**
- Patient ID

1. Press the symbol.
 - ⇒ The menu is displayed.
2. Select **Settings > Network > Identification > Clear Data**.
3. Specify the time after which the device is to discard measuring results and patient data:
 - a) Enter value (minimum: 10 sec./maximum: 3600 sec./1 h)
 - b) Confirm your entry by pressing the key

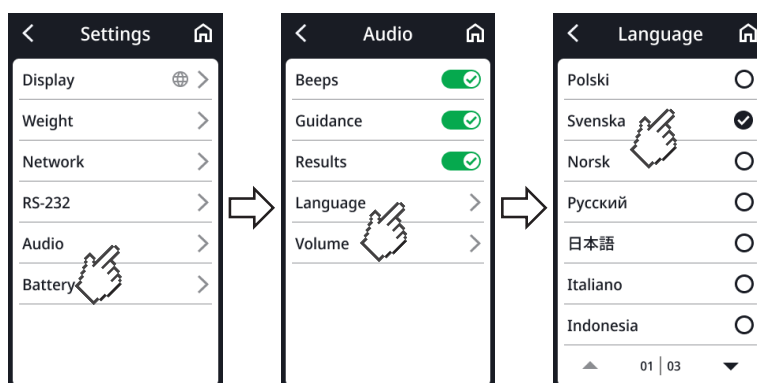


4. To exit the menu, press the symbol.

7.5 Configuring voice guidance (devices with ultrasonic measuring rod)

Selecting language To change the language, proceed as follows:

1. Press the  symbol.
⇒ The menu is displayed.
2. Select **Settings** > **Audio** > **Language**.

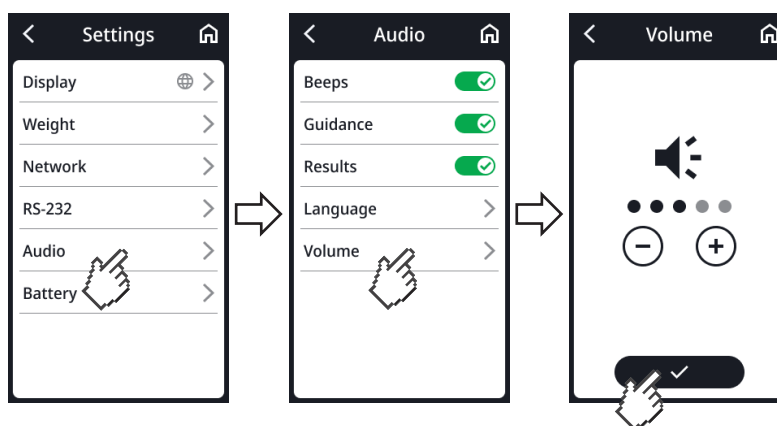


3. Select a language:
 - a) Press the arrow keys until the desired language appears on the display
 - b) Press the desired language
⇒ The setting is active.

4. To exit the menu, press the  symbol.

Setting the volume You can adjust the voice output volume.

1. Press the  symbol.
⇒ The menu is displayed.
2. Select **Settings** > **Audio** > **Volume**.



3. Adjust the volume.
4. Press the  key.
⇒ The setting is active.
5. To exit the menu, press the  symbol.

Configuring further audio settings

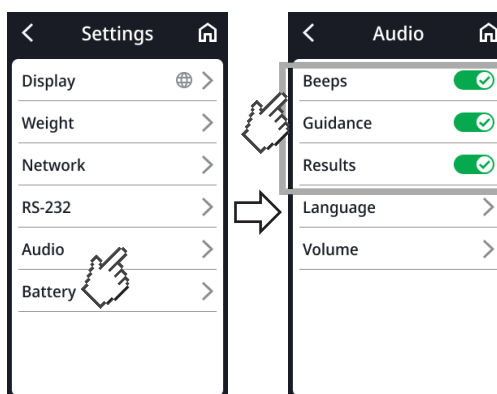
You can make additional further settings for voice guidance to adjust the device to your usage situation.

- **Beeps:** The beginning and end of height measurement are indicated by acoustic signals
- **Voice guidance:** Patient is guided through the measurement procedure with voice output
- **Results:** Measuring results (weight, height and BMI) are announced after every measurement procedure.

NOTE

Select a language that the patient understands for **Voice guidance** and **Results**
→ [Selecting language, page 69](#).

1. Press the  symbol.
⇒ The menu is displayed.
2. Select **Settings > Audio**.
3. Press the desired points to activate or deactivate them (here, all active).



⇒ The setting is active.

4. To exit the menu, press the  symbol.

7.6 Factory settings

Overview of factory settings

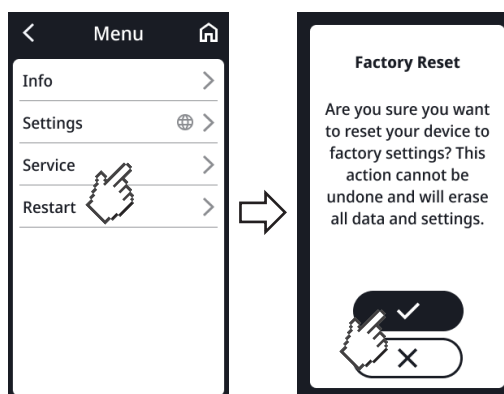
Function	Factory setting
General	
Tare	0 kg
Pre-tare	0 kg
Height	0 cm
Autohold	Off
Measurement mode (Guided Measurement, Self-Measurement)	None
Clear Data ^a	On reload
Battery (Battery Pack) Standby time until automatic switch-off (with seca 453 battery pack only)	5 min.
Sensitivity	Low

Function	Factory setting
Display: Language	None
Display: Date format	YYYY/MM/DD
Display: Name format	First name Sur-name
Display: Standby	3 min.
Display: Brightness	Stage 4 of 5
BMI/BSA	BMI
Units	Metric (kg, cm)
Server address^a	None
Server port^a	None
WiFi^a	On
Audio (devices with ultrasonic measuring rod)	
Beeps	On
Voice guidance	On
Results	On
Language	English
Volume	Level 3 of 5

^a Individual setting is **not** reset to factory settings.

Restore factory settings

- Press the  symbol.
⇒ The menu is displayed.
- Select **Service** > **Factory Reset**.



- To confirm your selection, press the  key.
⇒ The device will be reset to factory settings.
⇒ The main screen is displayed again.

NOTE

The following settings will **not** be reset:

- **Clear Data**
- **Server address**
- **Server port**
- **WiFi**

8 HYGIENE TREATMENT



WARNING! **Electric shock**

Use of fluids on the device may cause an electric shock.

- ▶ Disconnect the power supply connector before each hygiene treatment.
- ▶ Ensure that no fluids penetrate the device.



WARNING! **Risk of infection**

- ▶ Subject the device to a hygiene treatment at regular intervals as described in this section.

NOTICE!

Damage to device

Unsuitable cleaning agents and disinfectants may damage the sensitive surfaces of the device and impair its operability.

- ▶ Do not use aggressive or abrasive cleaning agents.
- ▶ Do not use organic solvents (e.g. white spirit or petroleum spirit).

8.1 Cleaning

- ▶ If required, moisten a soft cloth with a mild soap solution and wipe the device over with it.

8.2 Disinfecting

1. Disinfect the device at regular intervals with a disinfectant suitable for sensitive surfaces and acrylic glass (e.g. 70 % ethanol).
2. Follow the instructions for use of 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 and after each measurement	• Weighing platform • Handrail (devices with handrail)
As required	• Multifunctional display • Column (devices with ultrasonic measuring rod) • Head slide and measuring flap (devices with digital measuring rod)

8.3 Sterilizing

The device must not be sterilized.

9 FUNCTION CHECK



CAUTION! Personal injury

If you find faults or deviations during the function check which you are unable to remedy with the aid of the “Troubleshooting” section in this document, you must not use the device.

- ▶ Have the device repaired by seca Service or an authorized service partner.
- ▶ Follow the section entitled “Servicing” in this document.

▶ Perform a function check before each use.

A complete function check includes:

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

If you find faults or deviations during the function check, initially try to remedy the fault with the aid of the “Troubleshooting” section in this document.

10 TROUBLESHOOTING

If faults occur when operating the device, first attempt to remedy them yourself using the following tables. If the fault persists, contact seca Service or an authorized service partner.

With some faults, an error code appears on the multifunctional display. Please let seca Service have the error code when you contact them.

Information about display messages and the structure of error codes can be found here:

- → [Traffic light system for display messages, page 78](#)
- → [Error codes, page 79](#)

10.1 General faults

Fault	Cause	Remedy
No menu access possible	Self-Measurement measurement mode active	Clarify with the administrator/hospital technician whether the device can be operated in a different device mode • → Interrupting and restoring the power supply (power supply operation), page 78 • → Interrupting and restoring the power supply (rechargeable battery operation), page 77 • → Changing measurement mode, page 52

Fault	Cause	Remedy
Multifunctional display does not react when keys are pressed	Device is in an undefined state following implausible inputs	→ Restarting the device, page 77 - If the error recurs, inform seca Service
	With combinations of devices involving a handrail and/or measuring rod: Additional display connected	→ Restarting the device, page 77 - If the error recurs, inform seca Service
Multifunctional display remains dark after pressing	No connection to weighing platform	- Check whether the display cable is connected correctly - If the error recurs, inform seca Service
	No power supply: - No plug-in power supply unit connected - On devices with optional battery pack: Battery pack discharged	- Check whether the plug-in power supply unit is connected correctly - On devices with optional battery pack: → Charging optional battery pack, page 31 - If the error recurs, inform seca Service
	Device is in an undefined state following implausible inputs	→ Restarting the device, page 77 - If the error recurs, inform seca Service
	Multifunctional display defective	Inform seca Service

10.2 Measuring weight

Fault/error code	Cause	Remedy
Displayed weight is implausible	Weighing electronics using outdated zero point	- Remove the weight from the weighing platform - Press Weight display field → Restarting the device, page 77 - Wait until main screen is displayed again
	Weighing electronics defective	Inform seca Service
Autohold function cannot be deactivated	Device is connected to a network (intended behavior): Autohold function is activated automatically	If necessary, disconnect device from network
001-272XX-XXX to 008-272XX-XXX	Load cell or weight calculation module defective	Inform seca Service
010-272XX-XXX	Scale has been switched on with too high a load	→ Restarting the device, page 77 - If the error recurs, inform seca Service
013-272XX-XXX	Scale was caused to oscillate and was unable to determine the zero point	→ Restarting the device, page 77 - If the error recurs, inform seca Service
016-272XX-XXX	Maximum capacity exceeded	Ask patient to step off the scale
019-272XX-XXX	Ambient temperature too high or too low	Observe ambient conditions for operation, transport, and storage → General technical data, page 83
020-272XX-XXX to 023-272XX-XXX	One corner of the scale has been loaded excessively	Distribute weight evenly
		→ Restarting the device, page 77 - If the error recurs, inform seca Service
		Inform seca Service
024-272XX-XXX	No GAL value	Inform seca Service

10.3 Ultrasonic height measurement

Fault/error code	Cause	Remedy
 symbol appears during calibration	Calibration failed	• Ensure that no objects or people are in the immediate vicinity of the device during calibration • Ensure that the supplied calibration rod was used • Ensure that the calibration rod is positioned centrally on the foot silhouettes of the weighing platform
Ultrasound measuring head power LED does not light up	Device is in an undefined state following implausible inputs	• → Restarting the device, page 77 • If the error recurs, inform seca Service
	Wiring in the ultrasound measuring head incorrect	Wire the ultrasound measuring head as described in the corresponding installation instructions
	Power LED is defective	Inform seca Service
Foot silhouettes on the weighing platform do not illuminate	Device is in an undefined state following implausible inputs	• → Restarting the device, page 77 • If the error recurs, inform seca Service
	Foot silhouette illumination is defective	Inform seca Service
Patient instructions are not announced	Function not activated	Activate → Configuring further audio settings, page 70 function
	Volume set to zero	Increase volume → Setting the volume, page 69
	Loudspeaker is defective	Inform seca Service
No acoustic signals audible	Function not activated	Activate → Configuring further audio settings, page 70 function
	Volume set to zero	Increase volume → Setting the volume, page 69
	Loudspeaker is defective	Inform seca Service
Measuring results are not announced	Function not activated	Activate → Configuring further audio settings, page 70 function
	Volume set to zero	Increase volume → Setting the volume, page 69
	Loudspeaker is defective	Inform seca Service

10.4 Digital height measurement

Fault/error code	Cause	Remedy
Device in mobile use: Foot silhouettes on the weighing platform not illuminated	Function not available when operated with seca 453 battery pack (optional)	If function required, establish power supply using plug-in power supply unit
Measured value implausible	Head slide slipped due to greasy substances on the measuring rod	• Remove greasy substances • Do not use hand creams or moisturizing disinfectants immediately before a measurement
Measuring heights < 1.22 m: No measured value shown in the display	Digital scanning not available on the lower telescopic element	Read off the measured value on the head slide and enter in patient file manually → Measuring heights < 1.22 m, page 39
Head slide is hard to move	Swarf on the column or on the sliding surfaces of the head slide	Clean column → Hygiene treatment, page 72

10.5 Data transmission

Fault/error code	Cause	Remedy
 symbol is displayed	Patient ID not scanned	Scan patient ID
 symbol is displayed	ID scanning not set up	Check workflow settings of the seca connect 103 software
	Patient does not yet have a file in the EMR system	Create patient file in the EMR system
	Scanned ID is invalid	Create valid ID
Clear Data function: An entry of "0 seconds" is not accepted; the factory setting (300 seconds) is suggested instead	Implausible input; switching off the function is not intended in the factory	- Accept factory setting - Manually enter value between 10 and 3600 seconds
Workflow LED does not light up	Measurement not yet started	Start measurement (→ Operation, page 31)
	No network connection	→ Setting up network functions, page 65
	WiFi function deactivated	→ Activating/deactivating the WiFi function, page 67
	Workflow LED defective	Inform seca Service
Workflow LED illuminated in red	ID not found in EMR System or in the seca software	Create the ID in the EMR system or in the seca software
	Device has not saved measuring results to the clipboard	Repeat measurement
	Measuring results have not been sent to an EMR System or to seca software	- Repeat measurement - Check WiFi connection

10.6 Restarting the device

In individual cases (e.g. following implausible input) it may be necessary to restart the device. To do so, use the **Restart** function in the menu or interrupt the power supply and then restore it.

NOTE

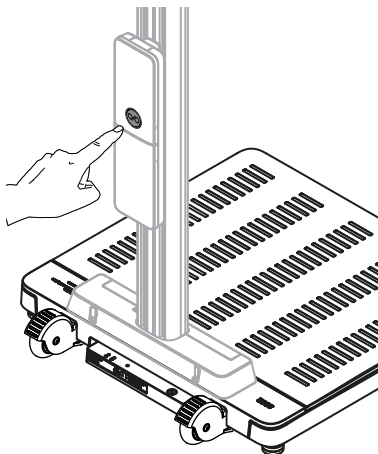
All the individual settings in the device are retained in the event of a restart. If you want to reset the device to factory settings, proceed as described in the relevant section: → [Factory settings, page 70](#)

10.7 Interrupting and restoring the power supply (rechargeable battery operation)

If restarting using the corresponding menu function is unsuccessful, you can briefly interrupt the power supply to the device:

1. Make sure that there is no load on the weighing platform.

2. Press and hold the  key on the battery pack.



- ⇒ The multifunctional display goes out.
- ⇒ The device is switched off.

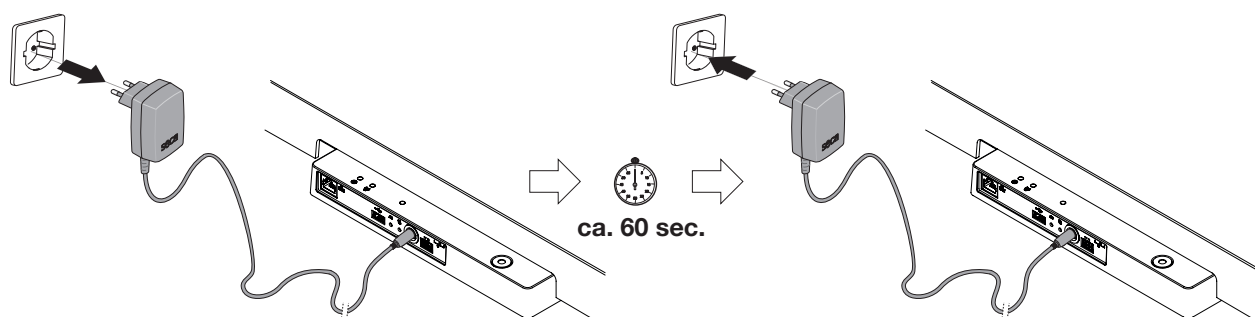
3. Release the  key and wait about a minute.

4. Press the  key on the battery pack again.
 - ⇒ The device and the multifunctional display switch on automatically.
 - ⇒ The device is ready for operation.

10.8 Interrupting and restoring the power supply (power supply operation)

If restarting using the display is unsuccessful, you can briefly interrupt the power supply to the device:

1. Make sure that there is no load on the weighing platform.
2. Disconnect the power supply unit from the power supply socket.
3. Wait about a minute.



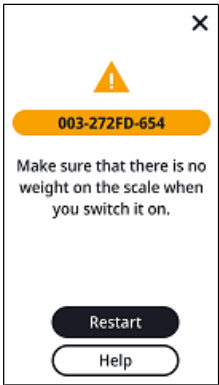
4. Plug the power supply unit back into the socket.
 - ⇒ The device and the multifunctional display switch on automatically.
 - ⇒ The device is ready for operation.

10.9 Traffic light system for display messages

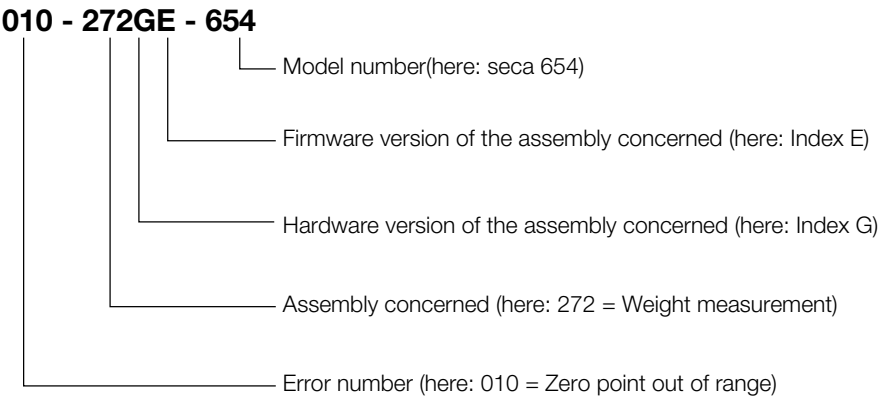
Symbol	Description
 Connected to network	Green: Action successful, e.g. device connected to a network
	Yellow: Incorrect operation or malfunction can be remedied by the user with the aid of the information in the display and the error tables in this section. Example: ✕  003-272FD-654 Make sure that there is no weight on the scale when you switch it on. Restart Help

Symbol	Description
	Red: Device error that cannot be remedied by the user, inform seca Service. Example: ×  010-272GE-620 Hardware error - scale cannot work properly. Restart Help

10.10 Error codes



010 - 272GE - 654



11 SERVICING

11.1 Verified scales



CAUTION!

Faulty measurements as a result of verification being performed poorly or not at all

- ▶ Have verification performed only by authorized persons.
- ▶ Always have verification performed if one or more quality seals are damaged.

seca recommends having your device serviced prior to verification.



CAUTION!

Faulty measurements as a result of poor servicing

- ▶ Have servicing and repairs carried out exclusively by seca Service or an authorized service partner.
- ▶ You can find your local service partner at www.seca.com.

Have authorized persons perform verification in line with national legal regulations.

Verification is necessary whenever one or more quality seals are damaged or the contents of the verification counter no longer match the number on the applicable verification counter seal. If quality seals are damaged, contact seca Service directly.

Verifications may only be performed by authorized agencies. To guarantee this, the scale is equipped with a verification counter which records each change in verification-related data. The GAL value used by the device can also be read off.

If you want to check whether the scale has been properly verified, proceed as follows:

1. Press the  symbol.
⇒ The menu is displayed.
2. Select **Info > About the device (About the Device)**
3. Press the  or  key to navigate on screen.
4. Read off the GAL value.
5. Read off the **Verification counter**.
⇒ The value must match the number on the verification counter seal.

Both numbers have to match for the verification to be valid. If the verification sticker and the verification counter do not match, the scale must be verified. Please contact your service partner or seca Service. Once the scale has been verified, a new, updated verification counter sticker is used to identify the verification counter reading. The person authorized to perform verification secures this verification with an additional seal. The verification counter sticker can be ordered from seca Service.

11.2 Non-verified scales

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



CAUTION!

Faulty measurements as a result of poor servicing

- ▶ Have servicing and repairs carried out exclusively by seca Service or an authorized service partner.
- ▶ You can find your local service partner at www.seca.com.

11.3 Height measuring devices

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



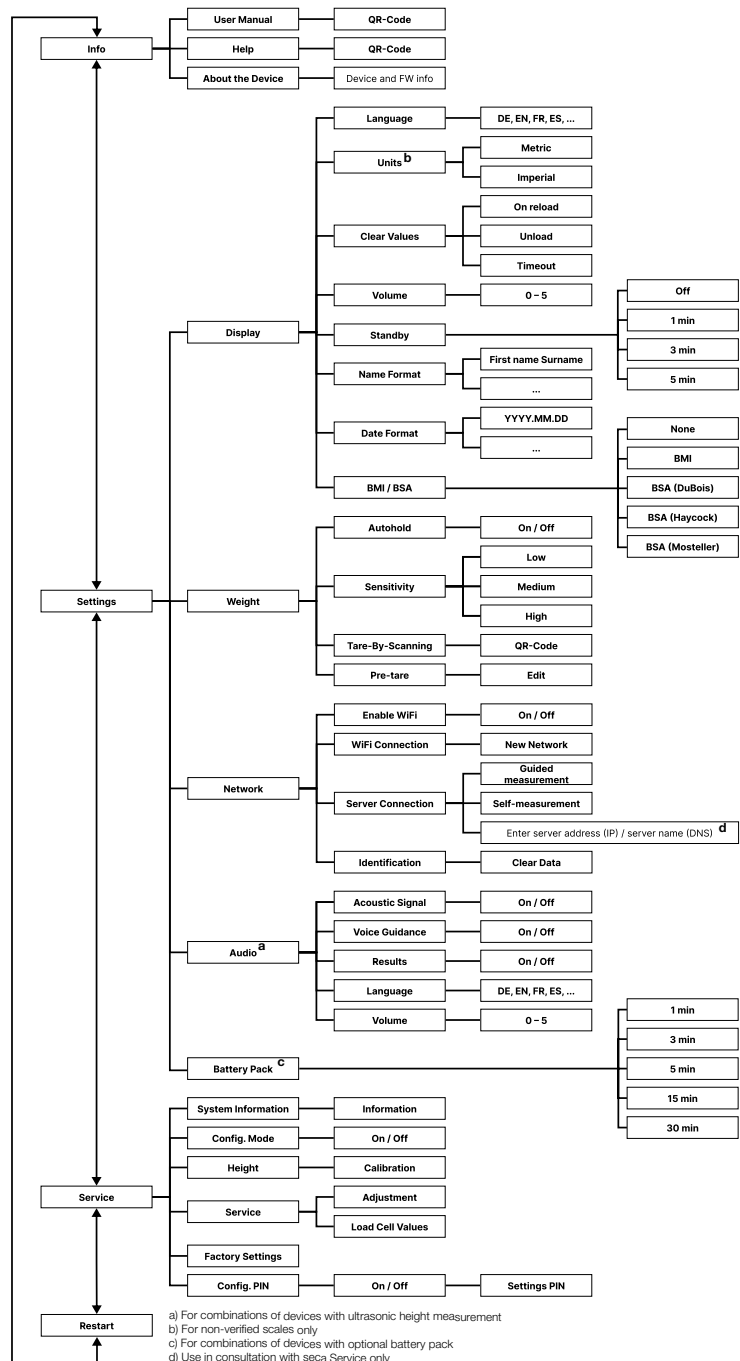
CAUTION!

Faulty measurements as a result of poor servicing

- ▶ Have servicing and repairs carried out exclusively by seca Service or an authorized service partner.
- ▶ You can find your local service partner at www.seca.com.

12 TECHNICAL DATA

12.1 Menu structure



12.2 General technical data

General technical data	
Ambient conditions, operation: • Temperature • Air pressure • Humidity	+10 °C to +40 °C (50 °F to 104 °F) 700 hPa – 1060 hPa 20 % – 80 % no condensation
Ambient conditions, storage: • Temperature • Air pressure • Humidity • Warm-up time from lowest storage temperature to operational temperature – At ambient temperature 20 °C – At ambient temperature 20 °C with condensation • Cooling time from highest storage temperature to operational temperature (at ambient temperature 20 °C)	-10 °C to +65 °C (14 °F to 149 °F) 700 hPa – 1060 hPa 0 % – 95 % no condensation 8 h 24 h 8 h
Ambient conditions, transport • Temperature • Air pressure • Humidity	-10 °C to +65 °C (14 °F to 149 °F) 700 hPa – 1060 hPa 0 % – 95 % no condensation
Power supply: Plug-in power supply unit • Supply voltage • Maximum current consumption	12 V max. 1.5 A
Mains voltage	100 V – 240 V
Power supply frequency	50 Hz – 60 Hz
Power consumption	max. 18 W
Power supply: optional seca 453 battery pack • Running time (display brightness: 80 %) • Charging time (discharged -> fully charged) • Charging method	Approx. 8 h Approx. 3 h Plug-in power supply unit for scale
IEC 60601-1: Medical electrical device, Type BF	
Type of protection in accordance with IEC 60529	IP 21
Duty cycle	Continuous duty
Medical device in accordance with Regulation (EU) 2017/745	Class I with measuring function
Application parts to IEC 60601-1: • seca 655/654 scales • seca 455 handrail • seca 254 digital telescopic measuring rod	Multifunctional display, glass plate Upper handrail arch Head slide, measuring flap
Interfaces: • USB • WiFi • LAN • Internal bus system/multifunctional display	USB 2.0, max. 500 mA 2.4 GHz, IEEE 802.11b/g/n/e/i IEEE 802.3u seca device bus (SDB)
Minimum weight (triggering measurement for combinations of devices with voice guidance)	0.5 kg

12.3 Dimensions and weights

Dimensions and weights	
Scale with handrail	
Dimensions:	
• Depth	653 mm
• Width	801 mm
• Height	1280 mm
Net weight	Approx. 25 kg
Scale with ultrasonic measuring rod	
Dimensions:	
• Depth	614 mm
• Width	600 mm
• Height (standard/short column)	2387 mm/2187 mm
Net weight	Approx. 22 kg
Scale with handrail and ultrasonic measuring rod	
Dimensions:	
• Depth	650 mm
• Width	801 mm
• Height (standard/short column)	2387 mm/2187 mm
Net weight	Approx. 29 kg
Scale with handrail and digital telescopic measuring rod	
Dimensions:	
• Depth	636 mm
• Width	801 mm
• Height (measuring rod retracted/extended)	1299 mm/2367 mm
Net weight	Approx. 26 kg

12.4 Weight measurement

seca 655

Verified model	
Verification in line with Directive 2014/31/EU	Class III
Maximum capacity	
• Weighing range 1	150 kg
• Weighing range 2	300 kg
Minimum capacity	
• Weighing range 1	1 kg
• Weighing range 2	2 kg
Graduation	
• Weighing range 1	50 g
• Weighing range 2	100 g
Tare range	300 kg (subtractive)
Accuracy on initial verification	
• Weighing range 1: 0 to 25 kg	± 25 g
• Weighing range 1: 25 to 100 kg	± 50 g
• Weighing range 1: 100 to 150 kg	± 75 g
• Weighing range 2: 0 to 50 kg	± 50 g
• Weighing range 2: 50 to 200 kg	± 100 g
• Weighing range 2: 200 to 300 kg	± 150 g

seca 654

Non-verified model	
Maximum capacity	360 kg
Minimum capacity	1 kg
Graduation	50 g
Tare range	360 kg (subtractive)
Accuracy • 0 kg to 50 kg • 50 kg to 360 kg at ambient temperature of 20° C and humidity of 45 %	± 50 g ± 50 g / ± 0.1 %

12.5 Height measurement

Ultrasonic measuring rod

Measuring range, graduation, accuracy	
Height measurement, standard	
• Measuring range without handrail • Measuring range with handrail • Graduation	60 – 220 cm 100 – 220 cm 1 mm
Accuracy • Measuring range 60 – 200 cm • Measuring range > 200 – 220 cm 20° C ambient temperature, no air movement, no interfering objects in the vicinity of the measuring range	± 5 mm ± 6 mm
Height measurement, short	
• Measuring range without handrail • Measuring range with handrail • Graduation	60 – 200 cm 100 – 200 cm 1 mm
Accuracy • Measuring range 60 – 180 cm • Measuring range > 180 – 200 cm 20° C ambient temperature, no air movement, no interfering objects in the vicinity of the measuring range	± 5 mm ± 6 mm

Signals and voice output	
Power LED on ultrasound head lights up continuously.	The device is ready to measure.
"Please stand upright and look straight ahead."	Instruction to the patient.
Power LED on ultrasound head goes off.	The measurement is in progress.
"Do not move. The measurement starts now."	Instruction to the patient.
Short beeps.	The measurement is in progress.
Long beep.	The measurement is complete.
"Your weight is (...) kilograms. Your height is (...) centimeters. Your BMI is (...)."	Announcement of the measuring results.
"The measurement is complete. Please leave the platform."	Instruction to the patient.

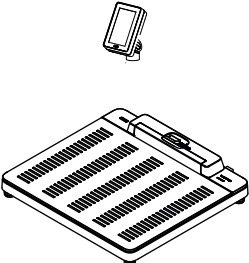
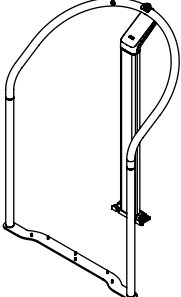
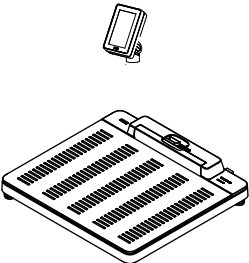
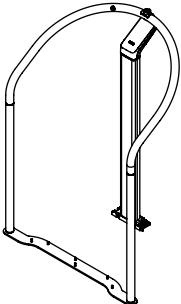
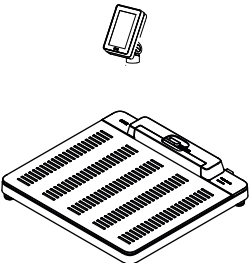
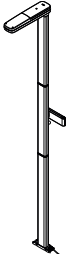
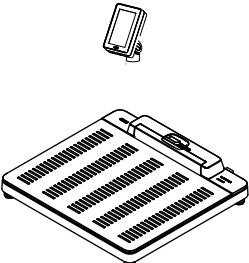
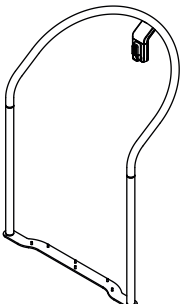
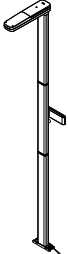
Digital telescopic measuring rod

Measuring range, graduation, accuracy	
Measuring range 1	10 – 122 cm (4 inch – 48 inch)
Measuring range 2	122 – 228.8 cm (48 inch – 90 inch)
Graduation	1 mm (1/8 inch)
Accuracy	± 5 mm

13 OPTIONAL ACCESSORIES AND SPARE PARTS

Accessory/spare part	Article number
Switch-mode power supply unit: 100-240 V~ / 50-60 Hz, 12 V= / 1.5 A / 18 W	68 32 10 272
Barcode scanner	See recommendation at www.seca.com
seca 463 holder for barcode scanner	463 0000 009
“Panda bear” figure seca 459	459 0000 009
seca 487 “animals” sticker for ultrasonic measuring rods	487 0045 009
seca 480 RS232 adapter box (not available for all models or in all countries, for more information, go to www.seca.com)	480 6900 009
seca 453 battery pack (not available for all models or in all countries, for more information, go to www.seca.com)	453 0000 009

14 COMPATIBLE SECA PRODUCTS

Scale	Handrail	Measuring rod	Configuration software
 seca 655/654 655 7021 099 654 1321 009	 seca 455 455 0001 009	—	 seca connect 103 from Version 2.0
 seca 654 654 1321 009	 seca 455 455 0001 009	 seca 254 254 1817 009	 seca connect 103 from Version 2.0
 seca 655/654 655 7021 099 654 1321 009	—	 seca 257, standard 257 1714 009 seca 257, short 257 2914 009	 seca connect 103 from Version 2.0
 seca 655/654 655 7021 099 654 1321 009	 seca 455 455 0002 009	 seca 257, standard 257 1714 009 seca 257, short 257 2914 009	 seca connect 103 from Version 2.0

15 DISPOSAL

15.1 Disposing of the device



Do not dispose of the device in your household waste. The device must be properly disposed of as electronic scrap. Follow your respective national regulations. For more information, please contact seca Service or an authorized service partner.

15.2 Disposing of batteries and rechargeable batteries



Do not dispose of used batteries and rechargeable batteries in household waste, regardless of whether they contain harmful substances or not. As a consumer, you are legally obliged to dispose of batteries and rechargeable batteries via local authority collection points or trade collection points. Only dispose of batteries and rechargeable batteries once they are completely discharged.

16 WARRANTY

There is a two-year warranty period from delivery for defects attributable to poor materials or workmanship. All movable parts, e.g. batteries, cables, power supply units, rechargeable batteries etc. are exempt. Defects which come under the warranty will be repaired for the customer free of charge against proof of purchase. Additional claims cannot be considered. Costs of transport to and from seca are the responsibility of the customer if the device is located somewhere other than the customer's headquarters. In the event of transport damage, claims under warranty can only be made if the complete original packaging was used for transport and the device was secured and fastened in it according to its originally packaged condition. You should therefore keep all packaging parts.

The warranty will be voided if the device is opened by persons not expressly authorized by seca to do so.

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

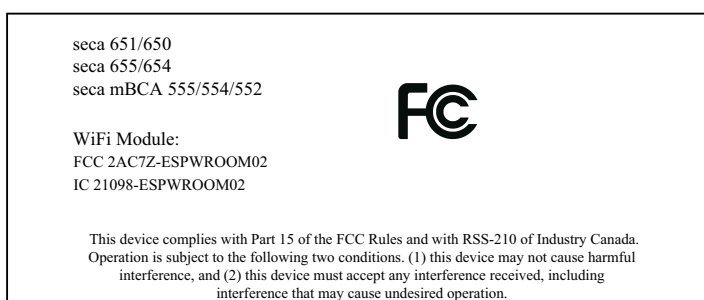
17 DECLARATIONS OF CONFORMITY

17.1 Europe



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

17.2 USA and Canada



NOTE

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

NOTE

Changes or modifications made to this equipment not expressly approved by seca may void the FCC authorization to operate this equipment.

NOTE

Radiofrequency radiation exposure information: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 1 m between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Medical Measuring Systems and Scales since 1840

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