

# **seca 655/654**

# **seca 455**

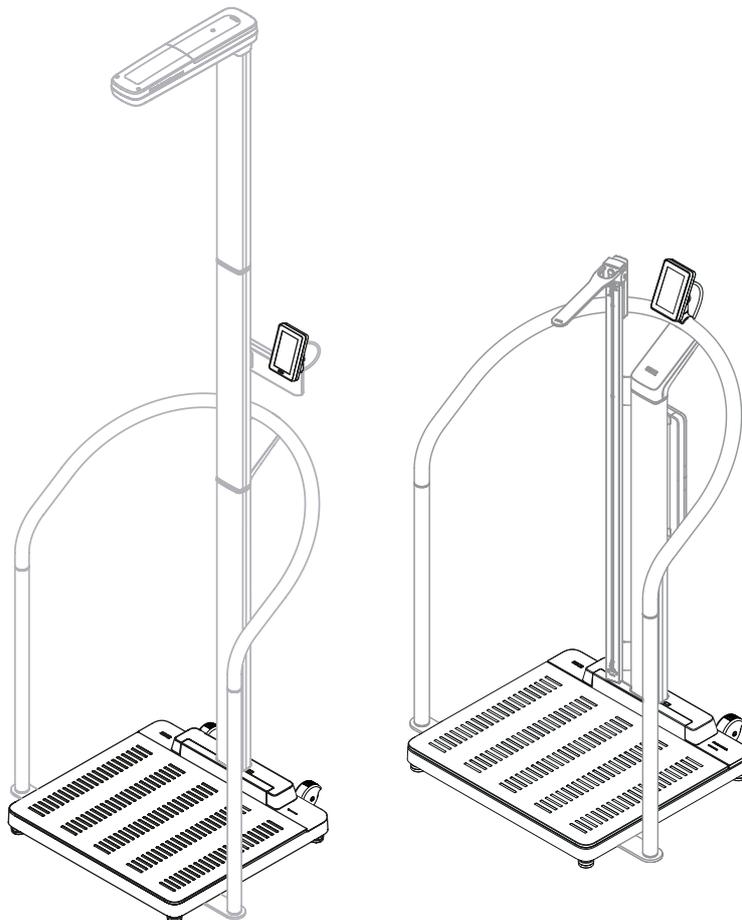
# **seca 257/256/254**

# **seca 453**

## **Instructions for Use**

EN-US\_excerpt from 17-10-07-654-100c\_2025-03S

Firmware version: 1.7



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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 93](#).

## 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

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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 50](#)

## 2 DESCRIPTION OF DEVICE

### 2.1 Intended use

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- seca 655/654** The electronic flat scale supports physicians in decision-making regarding diagnosis or therapy based on weight.
- seca 455** The handrail supports persons who cannot stand indepently for a longer period of time while being weighed on a compatible scale.
- seca 257/256** 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

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- 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 257/256/254** 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

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No contraindications are known.

### 2.4 Patient target group

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- seca 655/654** The scale ist 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 257/256/254** The measuring rod is indented for Persons of all ages (with the exception of babies), whose height lays 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

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<b>Assembly</b>	Devices shipped partly assembled may only be assembled by sufficiently qualified persons (such as specialist dealers, hospital technicians or seca Service technicians).
<b>Administration/network operation</b>	The device may only be set up and incorporated in a network by experienced administrators or hospital technicians.
<b>Measuring mode</b>	The device may only be operated by persons with formal training in the healthcare sector or in medicine.

## 2.6 Functional description

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<b>Measuring weight/entering height</b>	<p>Weight calculation is performed by four load cells. The measured results are shown on the multifunctional display. Height is entered manually.</p> <p>Body Mass Index (BMI) or Body Surface Area (BSA) are calculated automatically as soon as a height is entered.</p>
<b>Measuring weight and height</b>	<p>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.</p> <p>The <b>seca 257/256</b> measuring rod records height by means of ultrasound. The patient is guided through the measurement using configurable voice output.</p> <p>The <b>seca 254</b> digital telescopic measuring rod records the height of individuals <math>\geq 1.22</math> m by scanning a digital scale. For individuals <math>&lt; 1.22</math> m, height must be read off the measuring rod and entered manually on the multifunctional display of the scale.</p>
<b>Mobile measuring</b>	<p>Using the <b>seca 453</b> 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).</p> <p>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.</p>
<b>Network functions</b>	<p>The device can be integrated into a PC network via a LAN interface or via WiFi. The <b>seca connect 103</b> software is required to set up this integration.</p> <p>The <b>seca connect 103</b> software receives measurement data from the device and forwards them to an EMR System or to the <b>seca analytics 125</b> software.</p> <p>The <b>seca analytics 125</b> software receives measurement data from the <b>seca connect 103</b> software and processes them in graphical form. The software thus assists the attending physician in analyzing measured results and making a diagnosis.</p>
<b>Compatibility</b>	<p><b>seca connect 103</b> configuration software: Version 3.1 or higher, no downward compatibility</p> <p><b>seca analytics 125</b> analysis software: Version 1.8 or higher</p>

## 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 a service partner in your vicinity at [www.seca.com](http://www.seca.com) or by emailing [service@seca.com](mailto:service@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](http://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.
- ▶ Subject the device to a hygiene treatment at regular intervals as described in the relevant section of these instructions for use.
- ▶ Ensure that the patient does not have any infectious diseases.
- ▶ Ensure that the patient does not have any open wounds or infectious skin alterations which may come into contact with the device.

## 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 rechargeable batteries. 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.
- ▶ Store the device only in the intended storage conditions.
- ▶ Use only cleaning agents and disinfectants which match the details in the section entitled "Hygiene treatment".
- ▶ For scales: 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 (weight: kilograms/grams, height: meters/centimeters). Some devices have the option of displaying measuring results in different units. This is purely an additional function.

- ▶ Only use measuring results in SI units.
- ▶ The user takes 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 acid is 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 acid has 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 (bags) present a risk of suffocation.

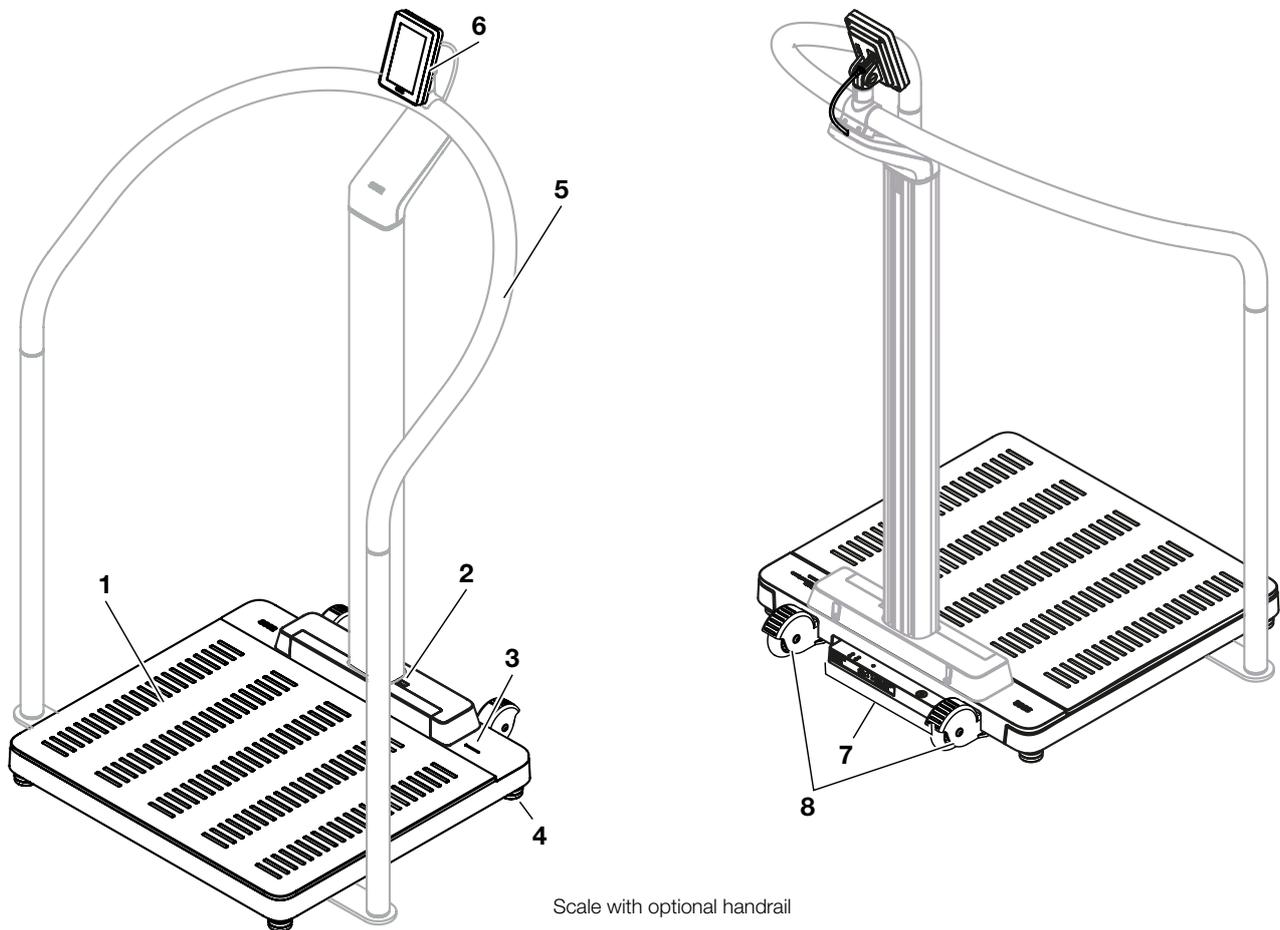
- ▶ Store packaging material out of the reach of children.
- ▶ If the original packaging material is no longer available, only use plastic bags with safety holes to reduce the risk of suffocation. Use recyclable materials if possible.

**NOTE**

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

## 4 OVERVIEW

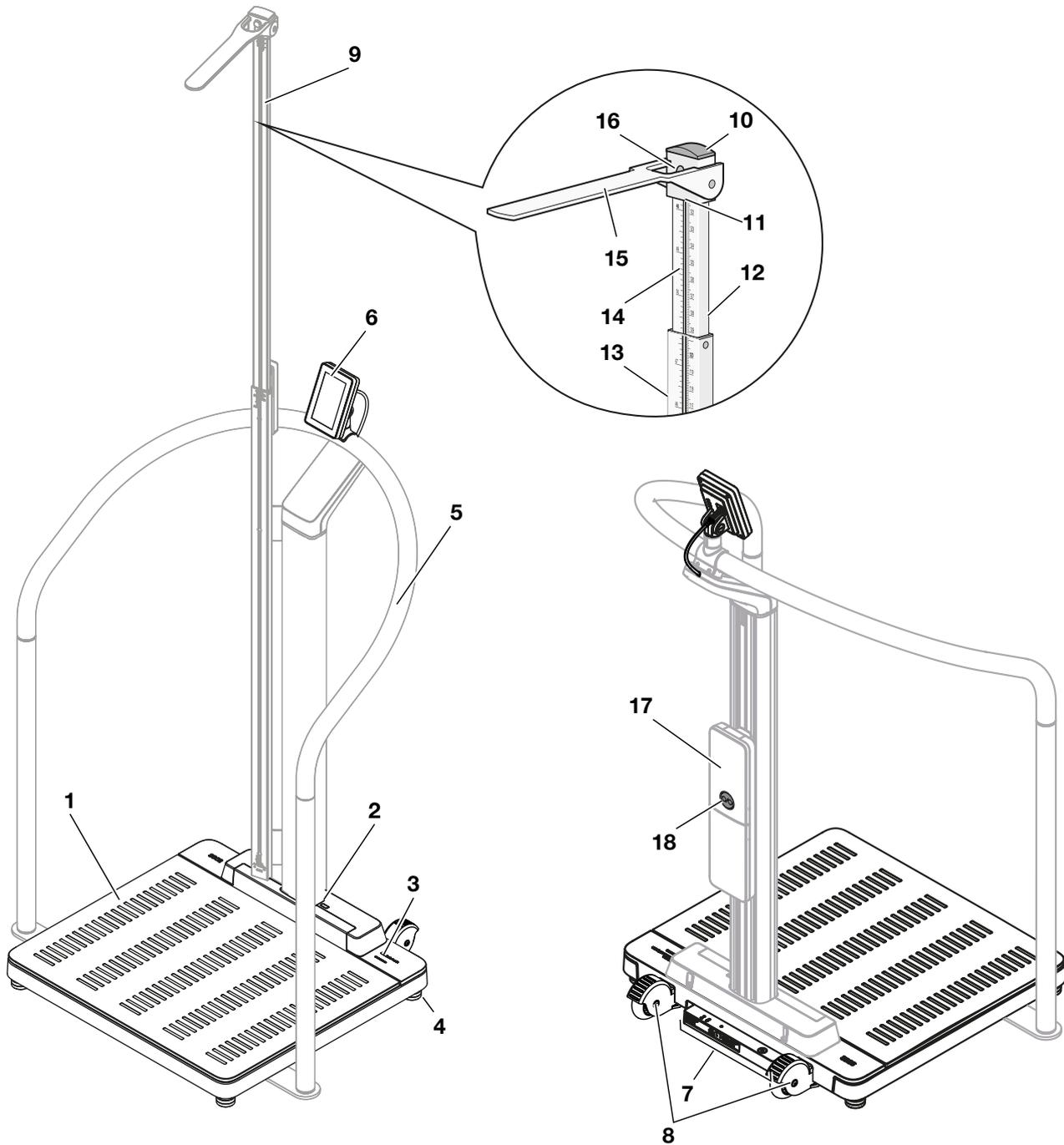
### 4.1 Controls: Combination with handrail



Item	Device component	Description
1	Weighing platform	<ul style="list-style-type: none"> <li>Records the weight of the patient</li> <li>Illuminated foot silhouettes for weight measurement</li> </ul>
2	Infrared interface	For functional expansion; no function at present
3	Workflow LED	<p>Indicates the status of data recording and data transmission (requirement: Connection to the <b>seca connect 103</b> software)</p> <ul style="list-style-type: none"> <li>Illuminated in green: Workflow active</li> <li>Flashing green (approx. 5 seconds): Submitting measured results to the EMR System (depending on setting)</li> <li>Illuminated in green (approx. 5 seconds): Measured results successfully submitted to the EMR System (depending on setting)</li> <li>Illuminated in red (approx. 5 seconds): Error during data transmission or workflow</li> </ul> <p><b>NOTE</b> The data recorded and transmitted are specified in the <b>seca connect 103</b> software. If you have any queries, contact your administrator or hospital technician.</p>
4	Foot screw	Used for precise alignment of the device (4 pcs)

Item	Device component	Description
5	seca 455 handrail (optional)	<ul style="list-style-type: none"> <li>• Used to support patients who are unable to stand securely</li> <li>• Installation option for the multifunctional display</li> <li>• → <a href="#">Compatible seca products, page 93</a></li> </ul>
6	Multifunctional display	Central control and display element → <a href="#">Symbols on the ID display (main screen), page 18</a> → <a href="#">Symbols on the ID display (menu), page 20</a>
7	Connection panel	Used for power supply and data transmission → <a href="#">Interfaces, page 25</a>
8	Caster	Used for transporting over short distances (2 pcs)

## 4.2 Controls: Combination with digital measuring rod and battery pack

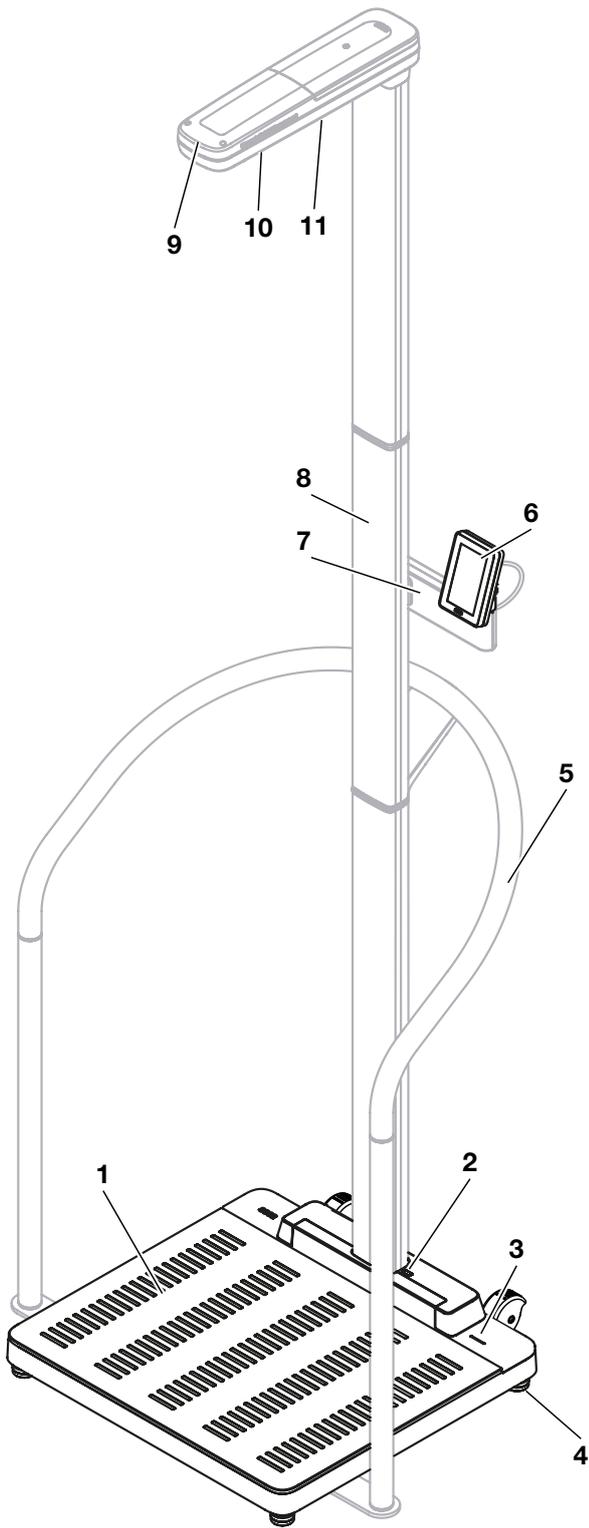


Front view: Scale with optional components:  
Handrail, digital telescopic measuring rod

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

Item	Device component	Description
1	Weighing platform	<ul style="list-style-type: none"> <li>Records the weight of the patient</li> <li>Illuminated foot silhouettes for measuring height</li> </ul>
2	Infrared interface	For functional expansion; no function at present
3	Workflow LED	<p>Indicates the status of data recording and data transmission (requirement: Connection to the <b>seca connect 103</b> software)</p> <ul style="list-style-type: none"> <li>Illuminated in green: Workflow active</li> <li>Flashing green (approx. 5 seconds): Submitting measured results to the EMR System (depending on setting)</li> <li>Illuminated in green (approx. 5 seconds): Measured results successfully submitted to the EMR System (depending on setting)</li> <li>Illuminated in red (approx. 5 seconds): Error during data transmission or workflow</li> </ul> <p><b>NOTE</b> The data recorded and transmitted are specified in the <b>seca connect 103</b> software. If you have any queries, contact your administrator or hospital technician.</p>
4	Foot screw	Used for precise alignment of the device (4 pcs)
5	<b>seca 455</b> handrail (optional)	Used to support patients who are unable to stand securely → <a href="#">Compatible seca products, page 93</a>
6	Multifunctional display	<p>Central control and display element</p> <p>→ <a href="#">Symbols on the ID display (main screen), page 18</a></p> <p>→ <a href="#">Symbols on the ID display (menu), page 20</a></p>
7	Connection panel	Used for power supply and data transmission → <a href="#">Interfaces, page 25</a>
8	Caster	Used for transporting over short distances (2 pcs)
9	<b>seca 254</b> digital telescopic measuring rod (optional)	<ul style="list-style-type: none"> <li>For measuring height (availability dependent on model and country) → <a href="#">Compatible seca products, page 93</a></li> <li>Can be combined with optional <b>seca 453</b> battery pack → <a href="#">Optional accessories and spare parts, page 92</a></li> </ul>
10	Head slide	For sliding the measuring flap onto the lower telescopic element
11	Read-off edge 1	For heights < 1.22 m, the measured result is read off under the head slide
12	Read-off edge 2	For heights ≥ 1.22 m, the measured 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	Latch	For releasing and latching the head slide
17	<b>seca 453</b> battery pack (optional)	<ul style="list-style-type: none"> <li>For mobile power supply (availability depends on model and individual country) → <a href="#">Optional accessories and spare parts, page 92</a></li> <li>Can be combined with optional <b>seca 254</b> digital telescopic measuring rod → <a href="#">Compatible seca products, page 93</a></li> </ul>
18	On/off key	<ul style="list-style-type: none"> <li>For switching the device on and off in rechargeable battery operation</li> <li>Flashing green briefly when switched on: Rechargeable battery operation starting</li> <li>Flashing red quickly when switched on: Battery pack discharged</li> <li>Flashing green slowly: Power supply operation, charging battery pack</li> <li>Illuminated in green: Power supply operation, battery pack fully charged</li> </ul>

### 4.3 Controls: Combination with ultrasonic measuring rod



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

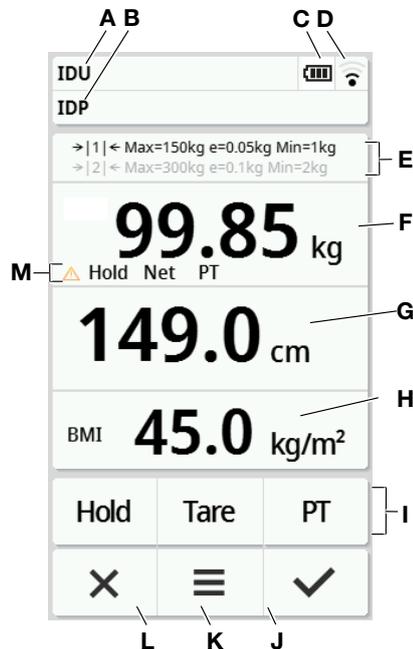


Rear view, scale  
with optional ultrasonic measuring rod

Item	Device component	Description
1	Weighing platform	<ul style="list-style-type: none"> <li>Records the weight of the patient</li> <li>Illuminated foot silhouettes for weight and height measurement</li> </ul>
2	Infrared interface	For functional expansion; no function at present
3	Workflow LED	<p>Indicates the status of data recording and data transmission (requirement: Connection to the <b>seca connect 103</b> software)</p> <ul style="list-style-type: none"> <li>Illuminated in green: Workflow active</li> <li>Flashing green (approx. 5 seconds): Submitting measured results to the EMR System (depending on setting)</li> <li>Illuminated in green (approx. 5 seconds): Measured results successfully submitted to the EMR System (depending on setting)</li> <li>Illuminated in red (approx. 5 seconds): Error during data transmission or workflow</li> </ul> <p><b>NOTE</b> The data recorded and transmitted are specified in the <b>seca connect 103</b> software. If you have any queries, contact your administrator or hospital technician.</p>
4	Foot screw	Used for precise alignment of the device (4 pcs)
5	<b>seca 455</b> handrail (optional)	Used to support patients who are unable to stand securely → <a href="#">Compatible seca products, page 93</a>
6	Multifunctional display	<p>Central control and display element</p> <p>→ <a href="#">Symbols on the ID display (main screen), page 18</a></p> <p>→ <a href="#">Symbols on the ID display (menu), page 20</a></p>
7	Bracket for multifunctional display	Used to install the multifunctional display on the measuring rod
8	<b>seca 257/256</b> ultrasonic measuring rod (optional)	For measuring height → <a href="#">Compatible seca products, page 93</a>
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 → <a href="#">Interfaces, page 25</a>
13	Caster	Used for transporting over short distances (2 pcs)

## 4.4 Symbols on the ID display (main screen)

This section contains information about the display content in measuring mode. Information about the display content for configuration and administration is available here:  
 → [Symbols on the ID display \(menu\)](#), page 20.



Item	Display element	Description
<b>A</b> <b>B</b>	<b>IDU</b> <b>IDP</b>	Only if connected to third-party EMR System (via <b>seca connect 103</b> ): <ul style="list-style-type: none"> <li>• <b>IDU</b>: User name</li> <li>• <b>IDP</b>: Name and date of birth of the patient</li> <li>• Press the area to display the IDs in enlarged form</li> </ul>
<b>C</b>		Status display for mobile power supply: (only with optional <b>seca 453</b> ) battery pack: <ul style="list-style-type: none"> <li>•  Battery pack discharged</li> <li>•  Battery pack almost discharged</li> <li>•  Battery pack almost charged</li> <li>•  Battery pack fully charged, mobile operation</li> <li>•  Battery pack fully charged, power supply operation</li> <li>•  Battery pack charging (in this case: &gt; 30 % charged)</li> </ul>
<b>D</b>		WiFi connection status display: <ul style="list-style-type: none"> <li>•  WiFi unavailable</li> <li>•  WiFi activated, no signal</li> <li>•  Signal very weak</li> <li>•  Signal weak</li> <li>•  Signal good</li> <li>•  Signal optimal</li> </ul>

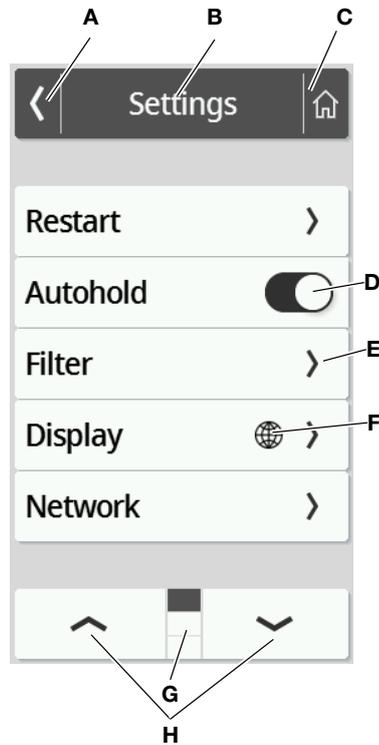
Item	Display element	Description
		<p>LAN connection status display:</p> <ul style="list-style-type: none"> <li> Not available</li> <li> Deactivated</li> <li> Activated</li> </ul>
E	Weighing technology data	<ul style="list-style-type: none"> <li>Weighing ranges: → 1 ←, → 2 ←</li> <li>Max: Maximum load per weighing range</li> <li>e: Graduations (verified models)</li> <li>d: Graduations (non-verified models)</li> <li>Min: Minimum load per weighing range</li> </ul>
F	<b>Weight</b> display field	<p>Body weight:</p> <p>Units:</p> <ul style="list-style-type: none"> <li>Kilograms</li> <li>Pounds (non-verified models)</li> </ul>
G	<b>Height</b> display field	<p>Height, press display for manual input:</p> <p>Units:</p> <ul style="list-style-type: none"> <li>Centimeters</li> <li>Feet/inch(es) (non-verified models)</li> </ul>
H	“Body Size Indicator” display field	<p>Body size indicator (press display field to switch):</p> <ul style="list-style-type: none"> <li><b>BMI</b>: Body Mass Index (kg/m<sup>2</sup>): Automatic calculation</li> <li><b>BSA (DuBois)</b>: Body Surface Area (m<sup>2</sup>): Automatic calculation</li> <li><b>BSA (Haycock)</b>: Body Surface Area (m<sup>2</sup>): Automatic calculation</li> <li><b>BSA (Mosteller)</b>: Body Surface Area (m<sup>2</sup>): Automatic calculation</li> </ul> <p>Body Size Indicator (activate/deactivate in menu → <a href="#">Selecting BMI/BSA/Waist circumference</a>, page 56):</p> <ul style="list-style-type: none"> <li>: Enter waist circumference</li> </ul>
I	Additional functions	<ul style="list-style-type: none"> <li> Additional function activated (here: <b>Hold</b>)</li> <li> Additional function deactivated</li> </ul>
J		<ul style="list-style-type: none"> <li>Confirm measured results and send to EMR System</li> <li>Confirm manual input</li> </ul>
K		<ul style="list-style-type: none"> <li>Press briefly: Open menu (→ <a href="#">Configuration</a>, page 49)</li> <li>Press and hold (approx. 5 seconds): → <a href="#">Changing device mode</a>, page 49</li> </ul>
L		<ul style="list-style-type: none"> <li>Clear measured results</li> <li>Clear manual input</li> <li>Cancel automated procedures</li> </ul>
M	Extended weighing functions	<ul style="list-style-type: none"> <li>: Non-verifiable function active</li> <li><b>Hold</b>: <b>Hold</b> function active</li> <li><b>NET</b>: <b>Tare</b> or <b>Pre-tare</b> function active</li> <li><b>PT</b>: <b>Pre-tare</b> function active</li> </ul>

## 4.5 Symbols on the ID display (menu)

This section contains information about the display content for configuration and administration. Information about the display content for measuring mode is available here: → [Symbols on the ID display \(main screen\), page 18](#).

The configuration options in the menu are dependent on the device mode selected:

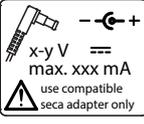
- → [Changing device mode, page 49](#)
- → [Functions/device mode, page 88](#)



	Symbol	Description
A		Back to the higher menu level
B	<b>Header</b>	Indicates the current menu level
C		Back to the main screen
D		<ul style="list-style-type: none"> <li>• Press: Activate/deactivate function</li> <li>•  Function activated</li> <li>•  Function deactivated</li> </ul>
E		<ul style="list-style-type: none"> <li>• Submenu available</li> <li>• Setting options available</li> </ul>
F		Keys with this symbol lead to the <b>Display\Language</b> menu item
G		<ul style="list-style-type: none"> <li>• Pages per menu level; here: 3</li> <li>•  Current page is displayed; here: Page 1</li> </ul>
H		<ul style="list-style-type: none"> <li>• Select page in the menu</li> </ul>

## 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)
	Article number
	Serial number
GAL	Value in $m/s^2$ (model-dependent) <ul style="list-style-type: none"> <li>Gravitational acceleration on earth</li> <li>Depends on the intended location</li> </ul>
ProdID	Product identification number
Approval Type	Type designation of design approval
	Follow instructions for use
	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 to IEC 60529: <ul style="list-style-type: none"> <li>Protection against ingress of solid foreign bodies with a diameter of over 12.5 mm</li> <li>Protection against access with fingers</li> <li>Protection against dripping water</li> </ul>
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 in accordance with 2014/31/EU
	Device complies with EU directives <ul style="list-style-type: none"> <li><b>M</b>: Conformity label in compliance with directive 2014/31/EU for non-automatic scales (verified models)</li> <li><b>22</b>: (Example: 2022) Year in which declaration of conformity was implemented and the CE label was applied (verified models)</li> <li><b>0102</b>: Notified Body for Metrology (verified models)</li> <li><b>0123</b>: Notified Body for Medical Devices</li> </ul>
	Medical device in accordance with Regulation (EU) 2017/745

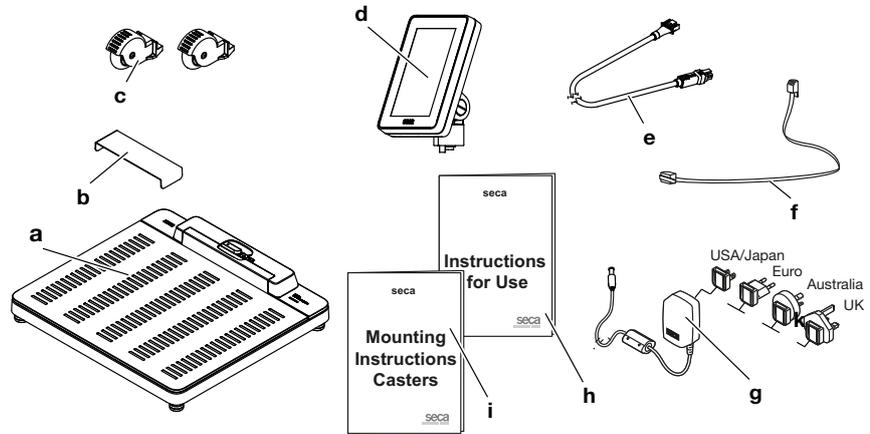
Markings on the device and on the type plate	
Symbol	Meaning
	Device meets the requirements of the USA and Canada. Certified and tested by a licensing laboratory (NRTL) of TÜV SÜD Product Services GmbH.
	<p>Device complies with United Kingdom directives</p> <ul style="list-style-type: none"> <li>• <b>M</b>: Conformity label in compliance with UK directive SI 2016 no. 1152 for non-automatic scales (NAWIR)(verified models)</li> <li>• <b>22</b>: (Example: 2022) Year in which declaration of conformity was implemented and the UKCA label was applied (verified models)</li> <li>• <b>xxxx</b>: Notified Body for Medical Devices of the United Kingdom</li> <li>• <b>yyyy</b>: Notified Body for Metrology of the United Kingdom (verified models)</li> </ul>
	<p>Importer/representative in the United Kingdom:</p> <p>seca Ltd 40 Barn Street B5 5QB Birmingham United Kingdom</p>
	<p>Importer/representative in Switzerland:</p> <p>seca ag (schweiz) Medizinische Waagen und Messsysteme Schönmatt Str. 4 CH-4153 REINACH</p>
	Symbol of the US Federal Communications Commission (FCC)
<b>FCC ID</b>	Device license number from the US Federal Communications Commission (FCC)
<b>IC ID</b>	Device license number from Industry Canada
	<p>Type plate on the power supply connection socket</p> <ul style="list-style-type: none"> <li>• Power supply voltage required in V</li> <li>• Maximum current consumption in mA</li> <li>• : Note polarity of device connector</li> <li>• : Operate device with direct current</li> <li>• : Use compatible seca power supply units only</li> </ul>
	LAN interface
	USB interface
	Power LED
	Network LED
	WPS button

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

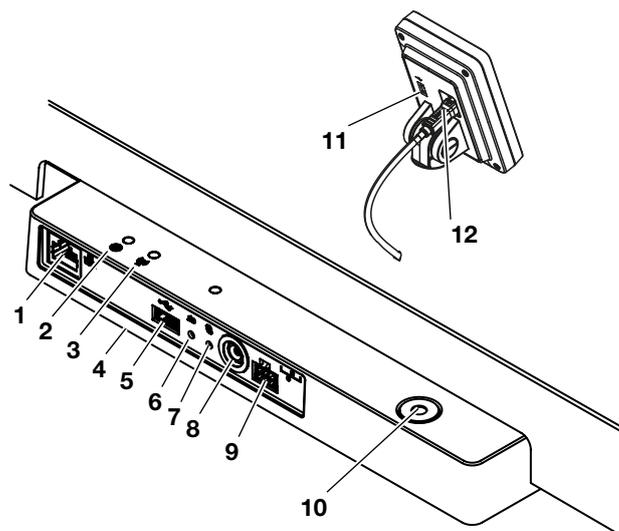
## 5 STARTING UP DEVICE

### 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	Instructions for use	1
i	Assembly instructions, casters	1

## 5.2 Interfaces

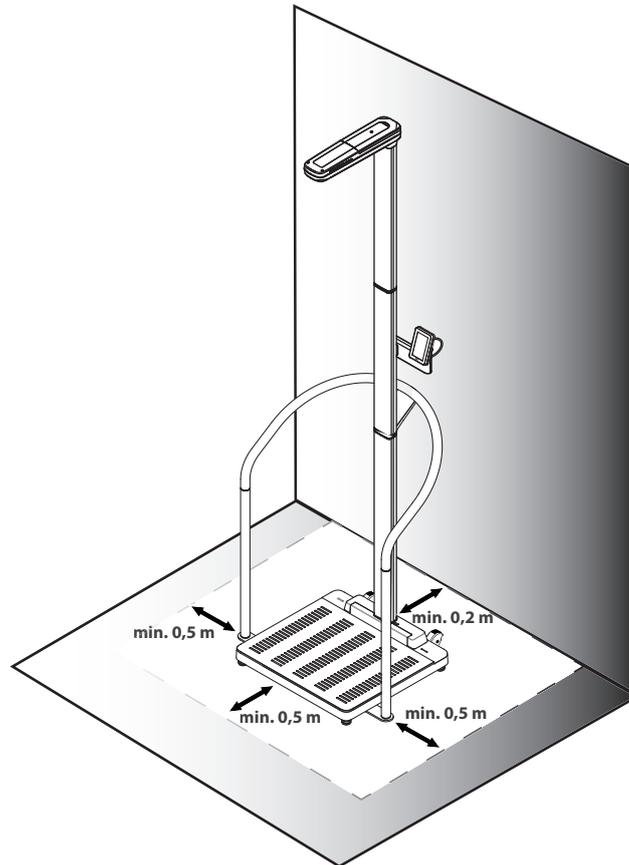


Item	Device component	Function
1	LAN interface	Used to connect the device to the EMR System in your institution (alternative to WiFi connection, <b>seca connect 103</b> software required).
2	Power LED	<ul style="list-style-type: none"> <li>• Illuminated in green: Device is ready for use</li> <li>• Illuminated in red: Device is defective</li> <li>• Flashing green: Device is active as access point</li> </ul>
3	Network LED	<ul style="list-style-type: none"> <li>• Flashing green: Establishing network connection</li> <li>• Illuminated in green: Network connection established</li> <li>• Illuminated in red: Network connection interrupted</li> </ul>
4	WiFi module (internal)	Used to connect the device to the EMR System in your institution (alternative to LAN connection, <b>seca connect 103</b> software required)
5	USB interface, weighing platform	No function in this device variant, use USB interface on multifunctional display
6	Reset button	<ul style="list-style-type: none"> <li>• Press and hold (approx. 8 seconds): Reset settings</li> <li>• Press briefly (approx. 1 second): Activate/deactivate access point function</li> </ul>
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: <b>seca 463</b> scanner bracket) → <a href="#">Optional accessories and spare parts, page 92</a>
12	Display interface	For supplying power to the multifunctional display and for data transmission

## 5.3 Setting up device

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

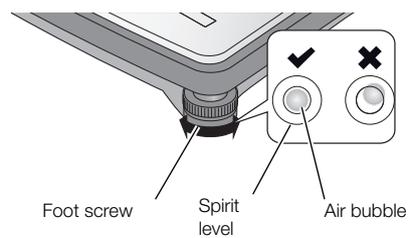
### **NOTICE!**

#### **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.

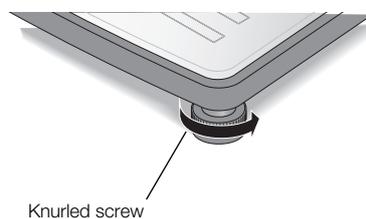


#### CAUTION!

##### 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 adjusted.
5. If an ultrasonic measuring rod is fitted, calibrate it → [Calibrating ultrasonic measuring rod, page 54](#).

## 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 63](#)
- **Operation:** Record patient and user IDs for transmitting measured results to the **seca analytics 125** software or to an EMR System: → [Completing the measurement, page 47](#)

### **WARNING!** Injury

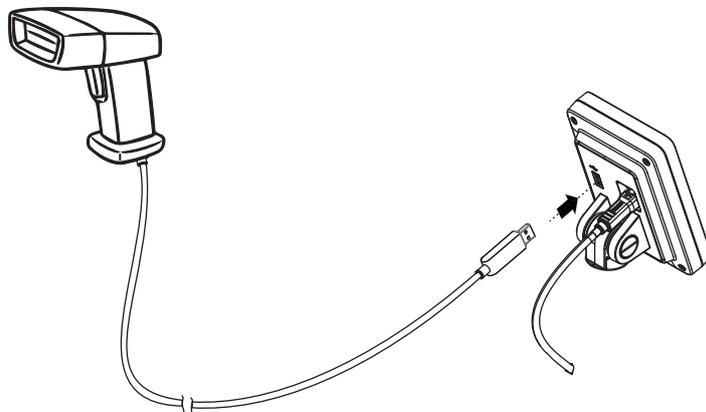
- ▶ Route the connector cable so that patients cannot become caught or strangle themselves in it.
- ▶ Route the connecting cable so as to prevent patients and users tripping.

### **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 connector 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 92](#)).

### **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 29](#).

## 5.5 Establishing power supply

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



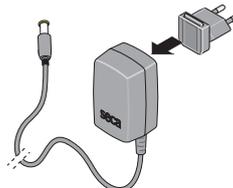
### WARNING!

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

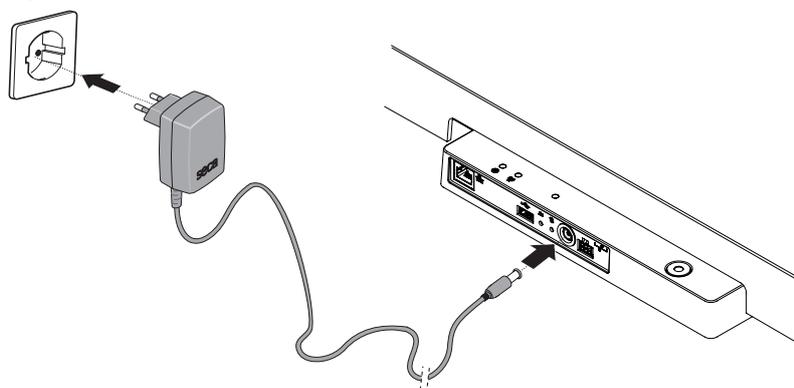
Conventional power supply units may deliver a higher voltage than is indicated on them. The measuring device may overheat, catch fire, melt or short-circuit.

- ▶ 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 75](#).

## 5.6 Installing the drip guard

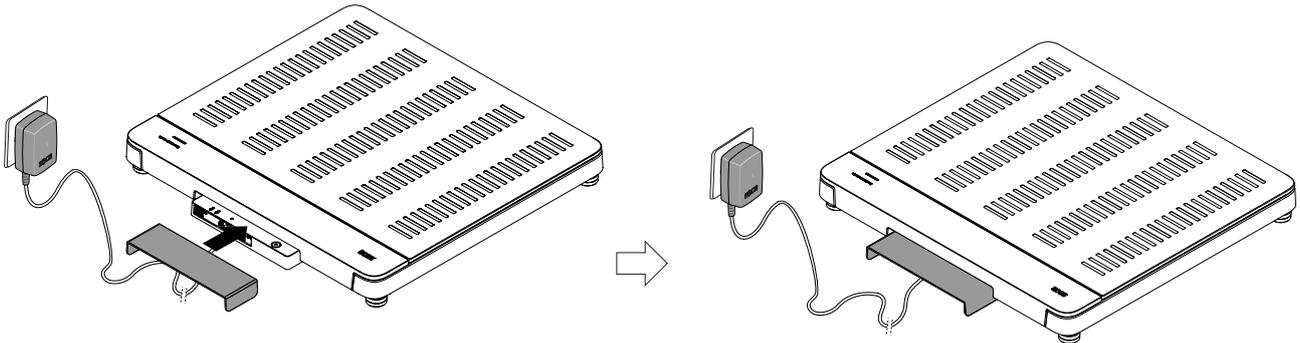
### NOTICE!

#### 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 Adapting device settings

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

- → [Changing device mode, page 49](#)
- → [Calling up/exiting a menu, page 50](#)
- → [Setting up network functions, page 63](#)
- → [Calibrating ultrasonic measuring rod, page 54](#)

## 5.8 Transporting device

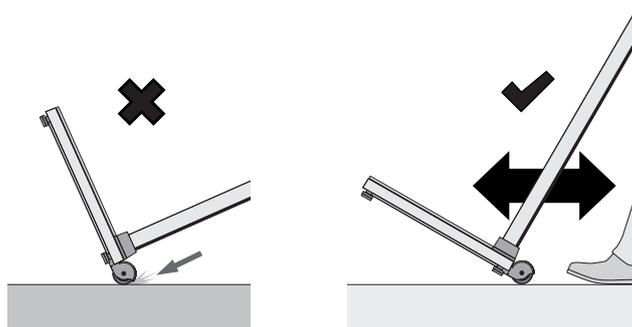
The device has two casters that facilitate transport over short distances.

**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.

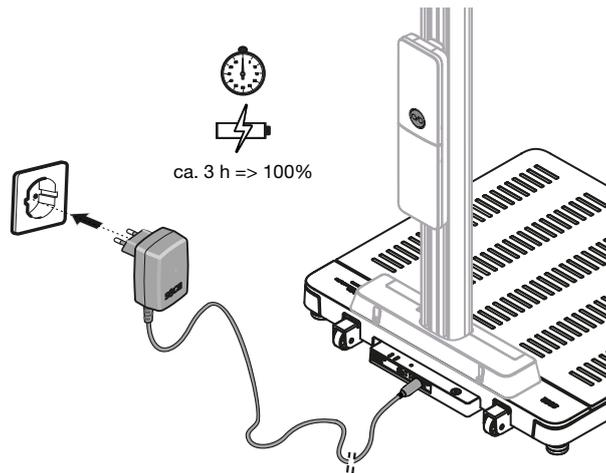
1. Remove the drip guard.
2. Disconnect all the device cable connections (e.g. power supply, network).
3. Tilt the device until it can be moved freely on the casters.



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.

## 5.9 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 29](#).



⇒ 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.

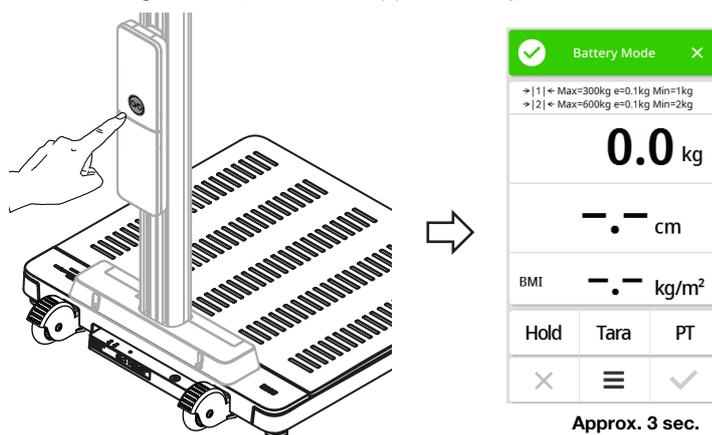
### **NOTE**

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 message **Battery operation** appears briefly.



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



### WARNING!

#### Incorrect assignment of measured results, data loss

Network functions are deactivated in rechargeable battery operation. Patient data cannot be loaded automatically/electronically. Measured results cannot be saved.

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

3. To switch off the device, press and hold the  key on 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 switching-off \(Auto off\), rechargeable battery operation only, page 51.](#)

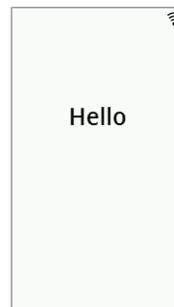
4. Restore the power supply using the power supply unit after each mobile use → [Establishing power supply, page 29.](#)
  - ⇒ The device is ready for use on a stationary basis.
  - ⇒ The battery pack charges automatically.
  - ⇒ Network functions are active.

## 6.2 Starting the measurement procedure

Device mode	Function available
Basic	•
Advanced	•
Expert	•
Service	•

### Activating the multifunctional display (stand-alone operation)

The multifunctional display will switch to standby mode (→ [Setting standby time, page 60](#)) after a set time period. The following screensaver is displayed in stand-alone operation:

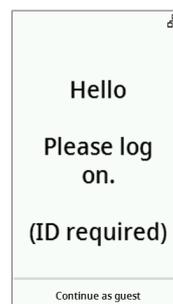


Screensaver for stand-alone operation

1. Press the multifunctional display to activate it.  
⇒ The main screen is displayed.
2. Ask the patient to step onto the weighing platform.
3. Complete the measurement as described in the relevant sections of these instructions for use.

### Activating the multifunctional display (network connection)

The multifunctional display will switch to standby mode (→ [Setting standby time, page 60](#)) after a set time period. The following screensaver is displayed with a network connection:



Screensaver for network connection

1. Press the multifunctional display to activate it.  
⇒ The main screen is displayed.
2. Scan your ID and the ID of the patient.

#### NOTE

If you press the **Continue as guest** key, you can start the measurement immediately and scan the IDs later.

3. Ask the patient to step onto the weighing platform.
4. Complete the measurement as described in the relevant sections of these instructions for use.

### Using a reserved device (network connection)

You can reserve the device (from firmware version 1.3) for your patient in the **seca analytics 125** software (depending on version). The name of the patient is displayed on the reserved device:



1. Ask the patient to step onto the weighing platform.  
⇒ The main screen is displayed.
2. Complete the measurement as described in the relevant sections of these instructions for use.

## 6.3 Measuring weight

Device mode	Function available
Basic	•
Advanced	•
Expert	•
Service	•



#### CAUTION!

##### Injury from falling

Persons with limited mobility may fall when stepping onto the weighing platform.

- Support people with limited mobility when they step onto 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. Read off the measured result.



## 6.4 Entering height manually

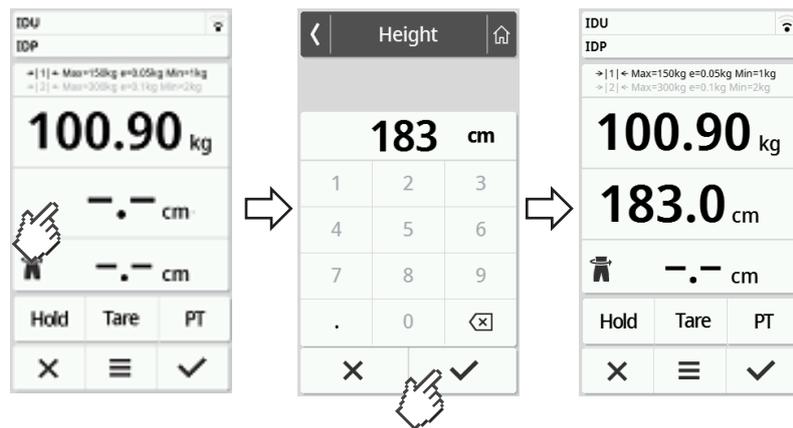
Device mode	Function available
Basic	•
Advanced	•
Expert	•
Service	•

### CAUTION! Patient hazard

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

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

1. Press the **Height** field.
2. Enter the height.
3. Press the  key to confirm your entry.



4. Press the  key to clear your entry.

## 6.5 Measuring weight and height (devices with ultrasonic measuring rod)

Device mode	Function available
Basic	•
Advanced	•
Expert	•
Service	•

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

Persons with limited mobility may fall when stepping onto the weighing platform.

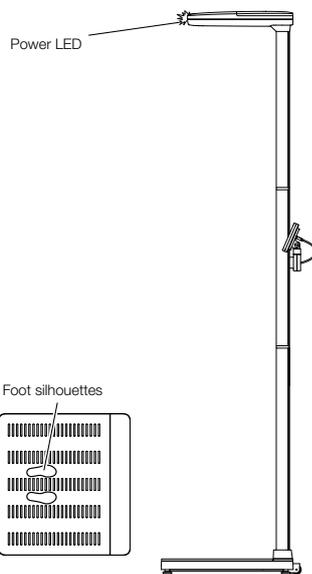
- ▶ Support people with limited mobility when they step onto the scale.

### **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 described in the following is based on the voice guidance preset at the factory. Information about configuration options can be found here: → [Configuring voice guidance \(devices with ultrasonic measuring rod\)](#), page 69.

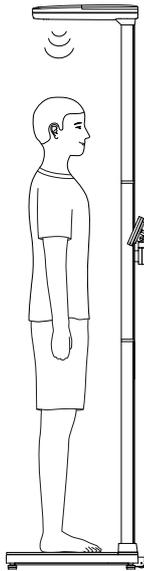
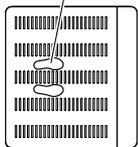


- ✓ There is no load on the weighing platform
- ✓ Power LED on ultrasound head is illuminated
- ✓ Foot silhouettes on the weighing platform are illuminated

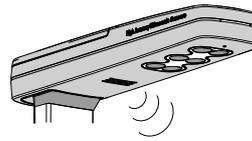
1. If necessary, press the multifunctional display screen to "wake" the device from standby.



Foot silhouettes



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:
  - Upright posture: Back and head straight
  - Feet on the illuminated foot silhouettes
5. Read off the measured result.



6. You have the following options for continuing:
  - Complete the measurement → [Completing the measurement, page 47](#)
  - Discard measured results: Press the **X** key

## 6.6 Measuring weight and height (devices with digital measuring rod)

Device mode	Function available
Basic	•
Advanced	•
Expert	•
Service	•



### CAUTION!

#### Injury from falling

Persons with limited mobility may fall when stepping onto the weighing platform.

- ▶ Support people with limited mobility when they step onto 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!

#### Implausible measured results

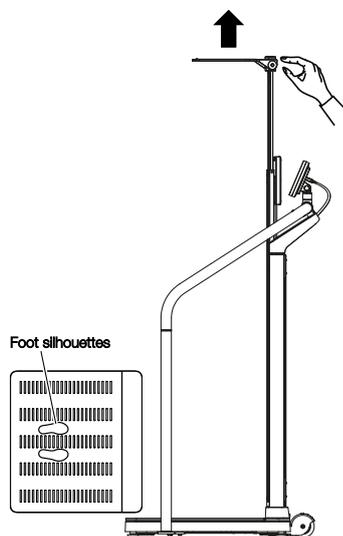
If substances containing grease get onto the column of the measuring rod, the head slide may slip, falsifying the measured results.

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

Measuring heights  
≥ 1.22 m

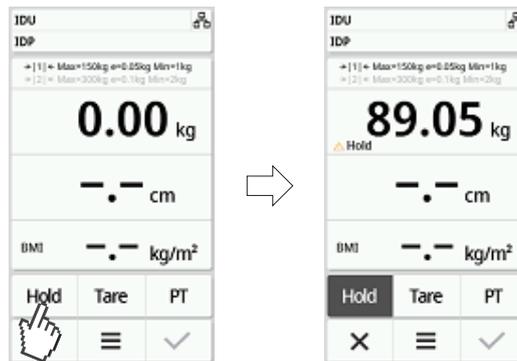
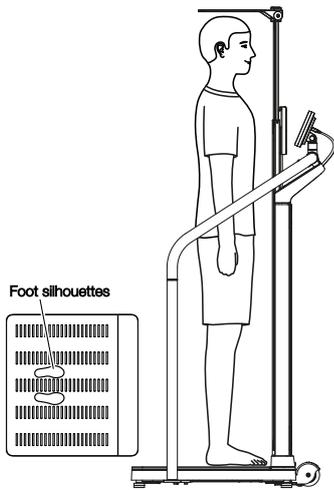
- ✓ There is no load on the weighing platform
- ✓ The upper telescopic element is pushed all the way in
- ✓ The measuring flap is folded down

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.

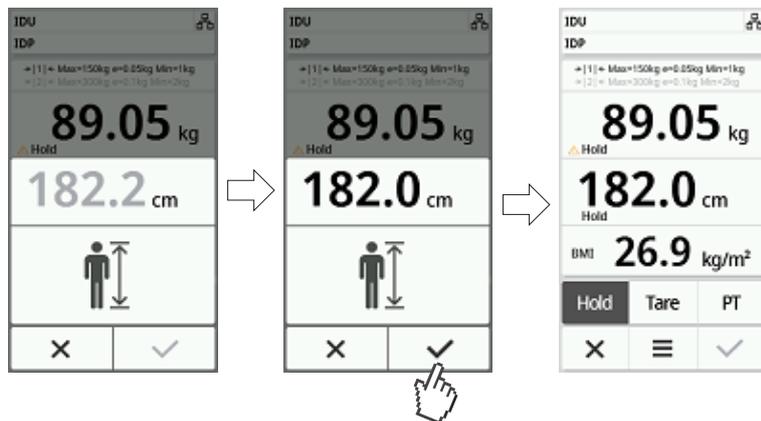
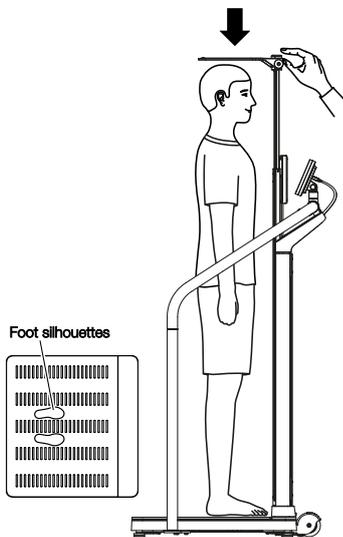
4. Ask the patient to stand under the measuring flap and to adopt the position below.
  - Upright posture: Back and head straight
  - Feet on the illuminated foot silhouettes
  - Face the column of the device
5. Press the **Hold** key.
  - ⇒ The display flashes until a stable weight is measured.
  - ⇒ The weight is displayed permanently.
  - ⇒ The  symbol and the **Hold** message are displayed



**NOTE**

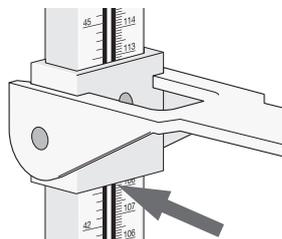
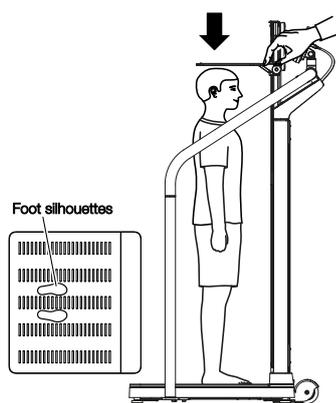
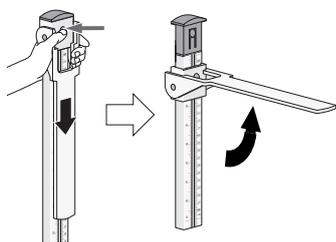
If the **Autohold** function is activated, weight and height are automatically displayed permanently as soon as stable measured values have been achieved.

6. Push the upper telescopic element down until the measuring flap is in contact with the patient's head.
7. Wait until a stable height value is displayed:
  - ⇒ The height value is no longer grayed out
  - ⇒ The  key is activated



8. Read off the measured result.
9. 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](#)
  - ▶ Discard measured results: Press the **X** key
10. Ask the patient to step off the weighing platform.
11. Push the upper telescopic element into its lowest position.

### Measuring heights < 1.22 m



12. Fold down the measuring flap.
  - ✓ 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 the column of the device
  - Feet on the illuminated foot silhouettes
  - 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 measured result under the head slide as shown in the illustration.
6. 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 measured result in the multifunctional display (→ [Entering height manually, page 36](#)) and complete the measurement (→ [Completing the measurement, page 47](#))
7. Ask the patient to step off the weighing platform.
8. Fold down the measuring flap.
9. Push up the head slide until it engages in the latch.

## 6.7 Using extended weighing functions

### Taring additional weight (Tare)

Device mode	Function available
Basic	–
Advanced	•
Expert	•
Service	•

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

#### NOTICE!

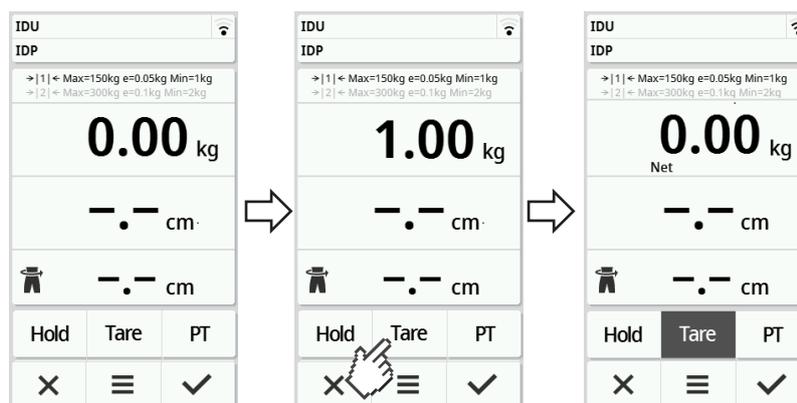
##### Faulty measurement as a result of force shunt

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.

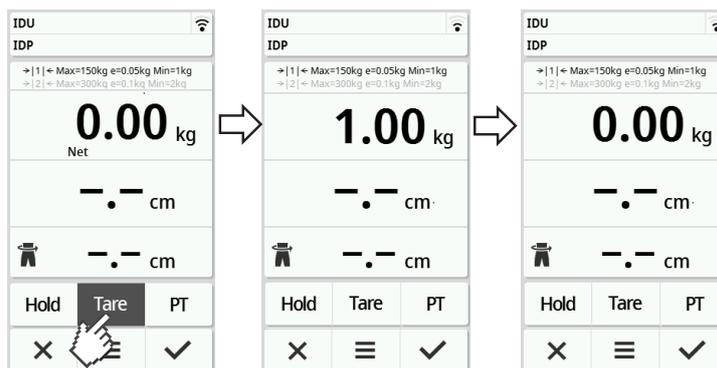
- ▶ Make sure that additional weights are only placed on the scale's weighing platform.

✓ There is no load on the scale.

- To activate the **Tare** function, proceed as follows:
  - Place an additional weight (here: 1 kg) on the weighing platform.
  - Press the **Tare** key.
  - Wait until the value **0.00** and the message **NET** are displayed.



- Weigh the patient.
- Read off the measured result.
  - ⇒ The additional weight is deducted automatically.
- To deactivate the function, proceed as follows:
  - Remove the weight from the weighing platform.
  - Press the **Tare** key.
  - Wait until the message **NET** goes off and the additional weight is displayed.
  - Remove the additional weight from the weighing platform.

**NOTE**

The maximum weight which can be displayed is reduced by the weight of the objects which have been tared.

**Permanently displaying the weight (Hold)**

Device mode	Function available
Basic	–
Advanced	•
Expert	•
Service	•

When the **Hold** function is activated, weight continues to be displayed after the weight has been removed from the scale. This enables you to attend to the patient before recording the weight.

✓ There is no load on the scale.

1. Ask the patient to step onto the scale.
2. Press the **Hold** key.
3. Wait until the weight has stopped flashing.  
⇒ The message **Hold** appears.



4. To deactivate the function, press the **Hold** key.  
⇒ The **Hold** message is no longer displayed.

**NOTE**

- If the **Autohold** function is activated, weight and height are automatically displayed permanently as soon as stable measured values have been achieved (→ [Activating Autohold function, page 52](#)).
- If you wish to update measured values (weight and height), press the **Weight** display field or press the **Hold** key again. The measurement is repeated and the updated measured values are displayed permanently.

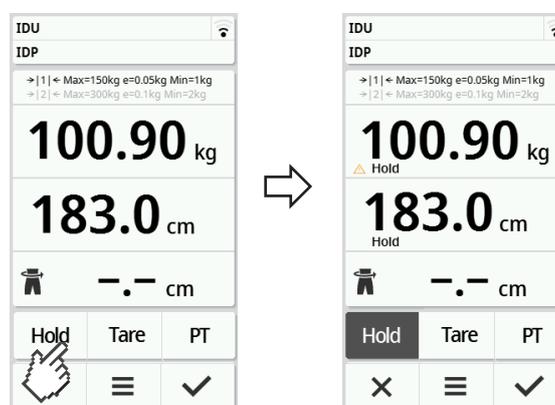
## Permanently displaying weight and height (Hold)

Device mode	Function available
Basic	—
Advanced	•
Expert	•
Service	•

When the **Hold** function is activated, weight and height continue to be displayed after the weight has been removed from the scale. This enables you to attend to the patient before recording the measured results.

✓ There is no load on the scale.

1. Ask the patient to step onto the scale.
2. Wait until height measurement has been completed and, if the device is set accordingly, the measured results have been announced.
3. Press the **Hold** key.  
⇒ The message **Hold** appears.



4. To deactivate the function, press the **Hold** key.  
⇒ The **Hold** message is no longer displayed.

### NOTE

- When the **Autohold** function is activated, the weight is automatically displayed permanently as soon as a stable measured result has been achieved (→ [Activating Autohold function, page 52](#)).
- If you wish to update the weight, press the **Weight** display field again or press the **Hold** key again. The measurement is repeated and the updated weight is displayed permanently.

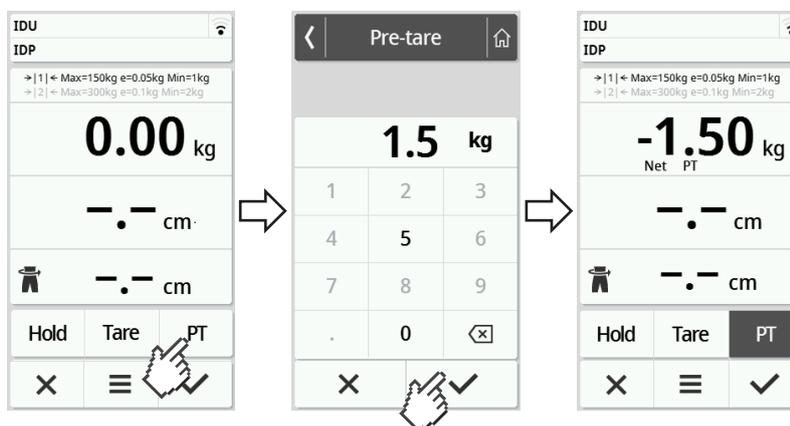
### Permanently store additional weight (Pre-Tare)

Device mode	Function available
Basic	—
Advanced	•
Expert	•
Service	•

The **Pre-tare** function can be used to save an additional weight permanently and subtract it from a measured result automatically, e.g. a flat-rate figure for shoes and clothing.

#### Activate Pre-tare function

1. Remove the weight from the weighing platform.
2. Press the **PT** key.
3. Enter the value.
4. Confirm the value with the  key.
  - ⇒ The set additional weight (here: 1.5 kg) is displayed with a minus sign in front.
  - ⇒ The messages **NET** and **PT** 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.

#### Deactivate Pre-tare function

1. Remove the weight from the weighing platform.
2. Press the **PT** key.
3. Clear the value with the  key.
  - ⇒ The set additional weight is no longer displayed.
  - ⇒ The function is deactivated.

## Switching weighing range

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



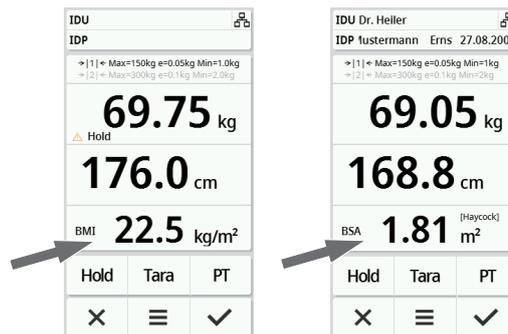
- ▶ To switch back to weighing range 1, completely remove the weight from the scale.  
⇒ Weighing range 1 is active again.

## Automatic calculation of BMI or BSA

Device mode	Function available
Basic	•
Advanced	•
Expert	•
Service	•

The device automatically calculates Body Mass Index (**BMI**) or Body Surface Area (**BSA**) depending on the default setting (→ [Selecting BMI/BSA/Waist circumf., page 56](#)).

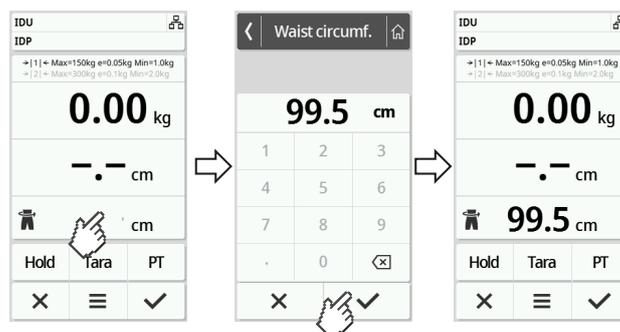
1. Determine the patient's weight (→ [Measuring weight, page 35](#)).
2. Determine the patient's height (→ [Entering height manually, page 36](#)).  
⇒ Either **BMI** or **BSA** is displayed depending on the default setting:



## Entering waist circumference

If the  symbol is visible on the main screen, you can enter the patient's waist circumference. The waist circumference entry can be configured → [Selecting BMI/BSA/Waist circumf., page 56](#).

1. Press the  display field.
2. Enter the waist circumference.
3. Confirm the entry with the  key.  
⇒ Waist circumference is displayed on the main screen.



## 6.8 Completing the measurement

### Stand-alone operation

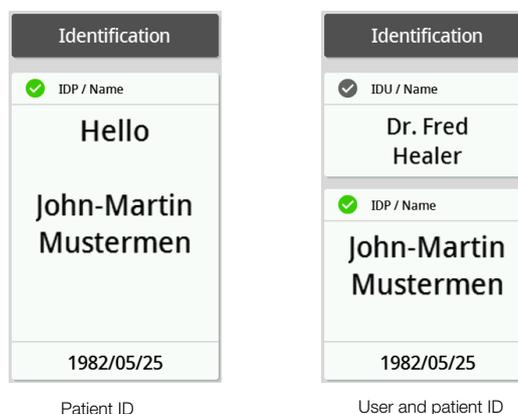
To complete a measurement on devices that are not connected to an EMR System or the **seca analytics 125** software, proceed as follows:

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.
4. Press the **X** key.
  - ⇒ Measured values and manual entries are discarded.
  - ⇒ The device is ready for the next measurement.

### Devices with connection to an EMR System

To complete a measurement on devices connected to an EMR System, proceed as follows:

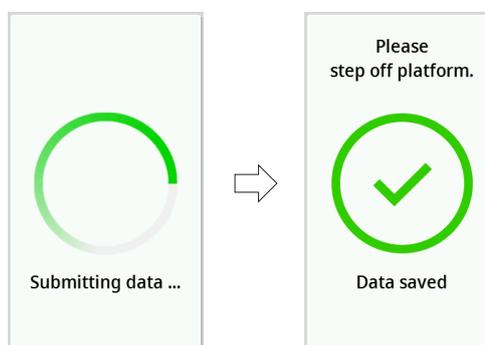
1. Make sure that the displayed measured values are plausible.
2. Press the **✓** key.
3. Scan the patient and/or user ID.
  - ⇒ The device indicates whether the scanned IDs are correct:



#### 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.

4. Press the **✓** key.
  - ⇒ The measured results are submitted to the EMR System and are assigned to the electronic patient file.

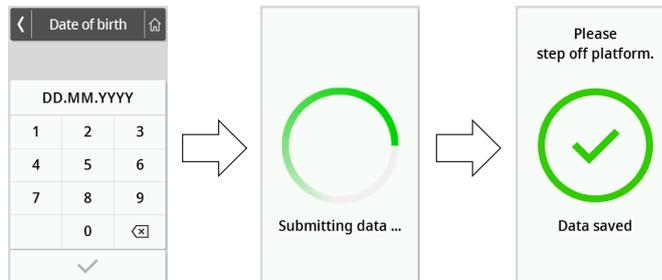


5. Ask the patient to step off the weighing platform.
  - ⇒ The device is ready for the next measurement.

### Devices with a connection to the **seca analytics 125** software

To complete a measurement on devices connected to the **seca analytics 125** software, proceed as follows:

1. Press the ✓ key.  
⇒ The **Date of birth** dialog window appears.
2. Enter the patient's date of birth.
3. Press the ✓ key.  
⇒ The measured results are submitted to the **seca analytics 125** software.



4. Ask the patient to step off the weighing platform.  
⇒ The device is ready for the next measurement.

## 7 CONFIGURATION

### 7.1 Basic functions

**Changing device mode** The following device modes are available for setting the device up for different usage situations:

Mode	Functions	Use	Recommended user group
<b>Basic</b>	<ul style="list-style-type: none"> <li>• Measurement functions:               <ul style="list-style-type: none"> <li>– Perform a measurement</li> <li>– Read off results</li> </ul> </li> <li>• Menu:               <ul style="list-style-type: none"> <li>– Restart the device</li> </ul> </li> </ul>	Guided measurements	Hospital personnel
<b>Advanced</b>	<ul style="list-style-type: none"> <li>• Measurement functions:               <ul style="list-style-type: none"> <li>– Perform a measurement</li> <li>– Read off results</li> <li>– Use additional functions</li> </ul> </li> <li>• Menu:               <ul style="list-style-type: none"> <li>– Limited device configuration</li> </ul> </li> </ul>	Guided measurements	Hospital personnel
<b>Expert</b>	<ul style="list-style-type: none"> <li>• Measurement functions:               <ul style="list-style-type: none"> <li>– Perform a measurement</li> <li>– Read off results</li> <li>– Use additional functions</li> </ul> </li> <li>• Menu:               <ul style="list-style-type: none"> <li>– Configure the device</li> <li>– Configure network connection</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Guided measurements</li> <li>• Configure the device</li> <li>• Network connection</li> </ul>	<ul style="list-style-type: none"> <li>• Hospital personnel</li> <li>• Hospital technicians</li> <li>• IT administrators</li> </ul>
<b>Service</b>	<ul style="list-style-type: none"> <li>• Measurement functions:               <ul style="list-style-type: none"> <li>– Perform a measurement</li> <li>– Read off results</li> <li>– Use additional functions</li> </ul> </li> <li>• Menu:               <ul style="list-style-type: none"> <li>– Configure the device</li> <li>– Configure network connection</li> <li>– Additional service functions</li> </ul> </li> </ul>	Service	Authorized service technicians

To select a device mode, proceed as follows:

1. Press and hold the  key (approx. 5 sec.) until the **Device mode** menu appears.  
⇒ The current device mode is displayed.
2. Press the desired device mode.  
⇒ The function is active.
3. Press the  key in the header.  
⇒ The main screen is displayed.

## Calling up/exiting a menu

1. To call up the menu, press the  key.  
⇒ The **Settings** menu is displayed.
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.

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

Device mode	Function available
Basic	–
Advanced	•
Expert	•
Service	•

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  key.  
⇒ The **Settings** menu is displayed.
2. Press the  or  key until the **User manual** menu item is displayed.
3. Press the **User manual** item.  
⇒ A QR code is displayed.



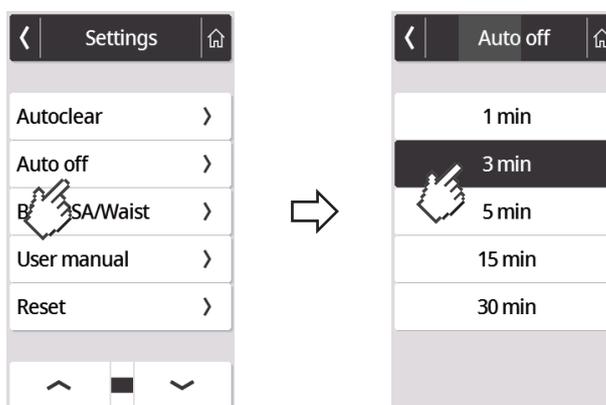
4. Scan the QR code (e.g. with your smartphone or tablet).  
⇒ This takes you to the [www.seca.com/support](http://www.seca.com/support) website where you can download the instructions for use.

### Setting the time period for automatic switching-off (Auto off), rechargeable battery operation only

Device mode	Function available
Basic	–
Advanced	•
Expert	•
Service	•

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 **Settings** menu is displayed.
2. Press the  or  key until the **Auto off** menu item is displayed.
3. Press the **Auto off** item.
4. Press the time period after which the device is to switch off automatically (here: 3 minutes)



5. To exit the menu, press the  key.

## 7.2 Measuring

### Activating Autohold function

Device mode	Function available
Basic	–
Advanced	•
Expert	•
Service	•

If you activate the **Autohold** function, it is no longer necessary to activate the **Hold** function manually for each individual measurement.

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

#### NOTE

This function is activated at the factory on some models. The function can be deactivated.

1. Press the  key.  
⇒ The **Settings** menu is displayed.



2. Press the  or  key until the **Autohold** menu item is displayed.
3. Select the desired setting:
  -  Function activated
  -  Function deactivated
4. To exit the menu, press the  key.

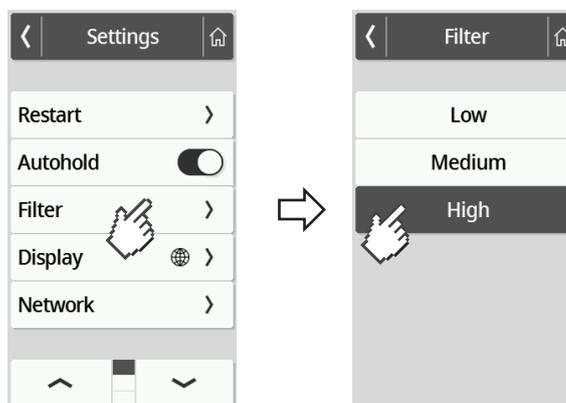
## Setting filter

Device mode	Available
Basic	–
Advanced	•
Expert	•
Service	•

The **Filter** function can be used to avoid interference during weight determination. The selected setting has the following effects on measurements with the **Hold/Autohold** function activated:

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

1. Press the  key.  
⇒ The **Settings** menu is displayed.
2. Press the  or  key until the **Filter** menu item is displayed.
3. Press the **Filter** item.  
⇒ The current setting is displayed.



4. Press the desired filter stage.  
⇒ The setting is active.

Settings	Weight determination
Low	Fast
Medium	Medium
High	Slow

**NOTE**

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

## Calibrating ultrasonic measuring rod

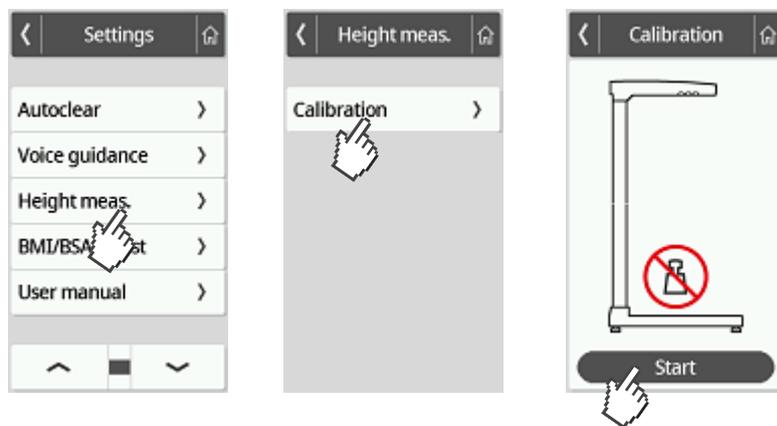
Device mode	Function available
Basic	–
Advanced	–
Expert	•
Service	•

Before performing a measurement with the device for the first time, height measurement must be calibrated. Repeat this calibration at least once per year.

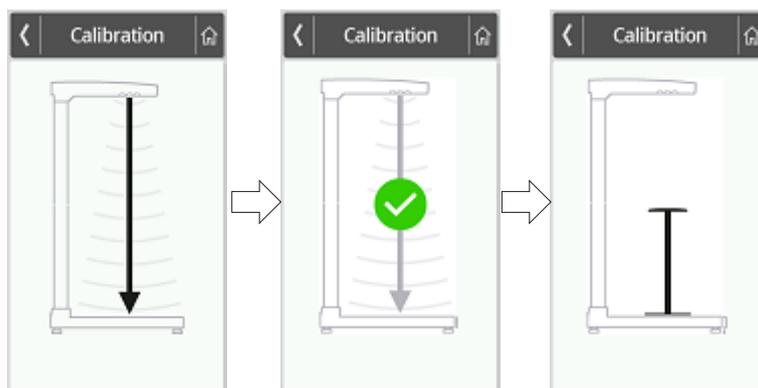
The automated calibration procedure consists of two steps:

- 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)

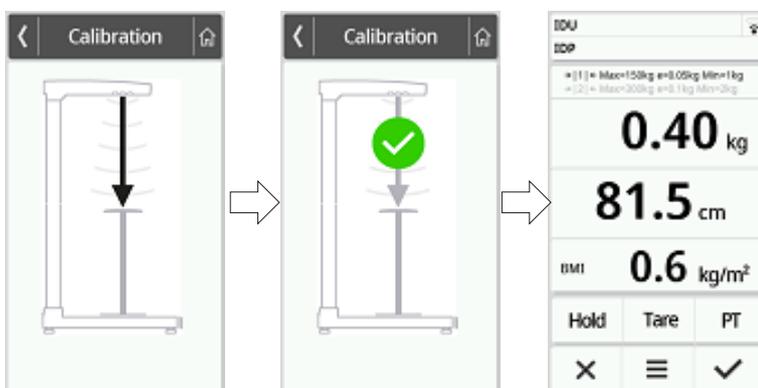
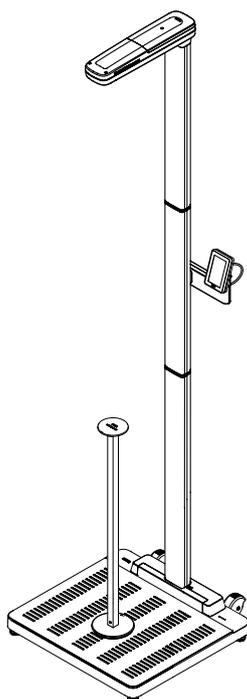
1. Press the  key.  
⇒ The **Settings** menu is displayed.
2. Press the  or  key until the **Height meas.** menu item is displayed.
3. Press the **Height meas.** menu item.
4. Press the **Calibration** menu item.  
⇒ The **Calibration** dialog is displayed:
5. Press the **Start** key.  
⇒ The first step of the calibration procedure starts.



6. Step back from the measuring device (distance approx. 0.5 m).
7. Wait until the first part of the calibration procedure has been completed.  
⇒ The device requests you to place the calibration rod on the weighing platform:



8. Place the calibration rod centrally on 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.  
⇒ The main screen is displayed again.



11. Remove the calibration rod from the weighing platform.  
⇒ The device is ready to measure.

## Selecting BMI/BSA/Waist circumf.

Device mode	Function available
Basic	–
Advanced	–
Expert	•
Service	•

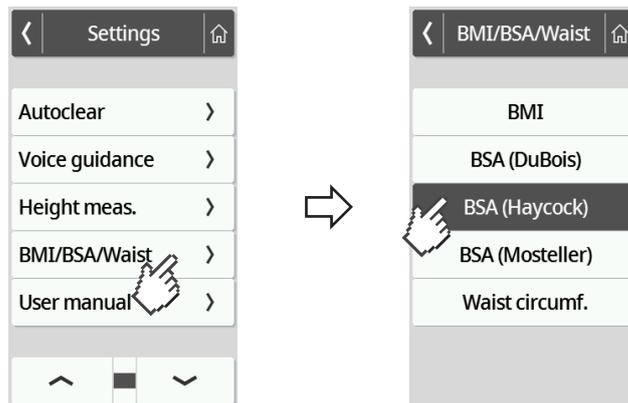
You can specify whether the device calculates Body Mass Index (**BMI**) or Body Surface Area (**BSA**) as soon as the patient's weight and height are available.

You can also set the device so that it does not display the **BMI** or **BSA** value calculated, but waist circumference **Waist circumf.** can be entered manually.

### NOTE

If the **Waist circumf.** setting is selected, automatic BMI/BSA calculation is not possible.

1. Press the  key.  
⇒ The **Settings** menu is displayed.
2. Press the  or  key until the **BMI/BSA/Waist** menu item is displayed.
3. Press the **BMI/BSA/Waist** item.
4. Press the desired setting:  
⇒ The setting is active.



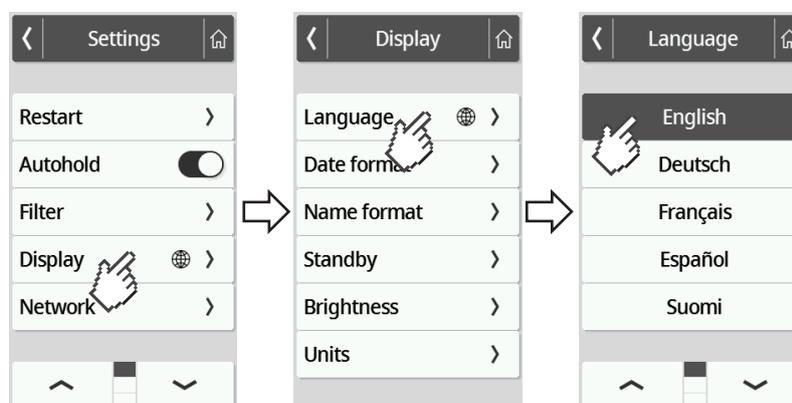
## 7.3 Adjusting display settings

### Setting display language

Device mode	Function available
Basic	–
Advanced	•
Expert	•
Service	•

The display language can be set.

1. Press the  key.  
⇒ The **Settings** menu is displayed.
2. Press the  or  key until the **Display** menu item is displayed.
3. In the **Display** menu, select the **Language** item.
4. Press the desired language.  
⇒ The setting is active.



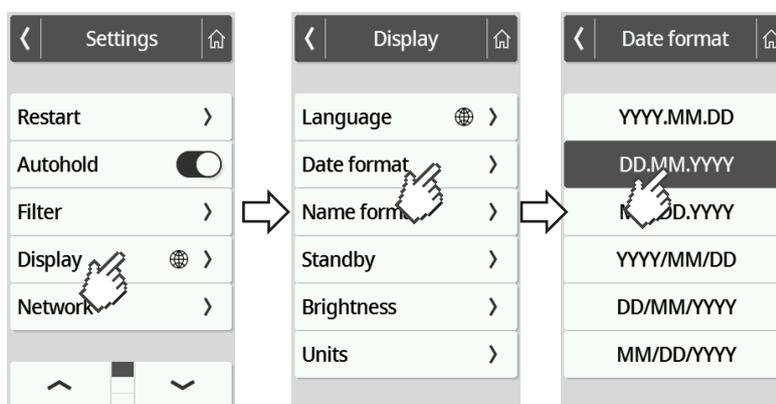
- To exit the menu, press the  key.

## Setting date format

Device mode	Function available
Basic	–
Advanced	•
Expert	•
Service	•

The format in which the patient's date of birth is displayed can be set.

- Press the  key.  
⇒ The **Settings** menu is displayed.
- Press the  or  key until the **Display** menu item is displayed.
- In the **Display** menu, select the **Date format** item.
- Press the desired date format.  
⇒ The setting is active.



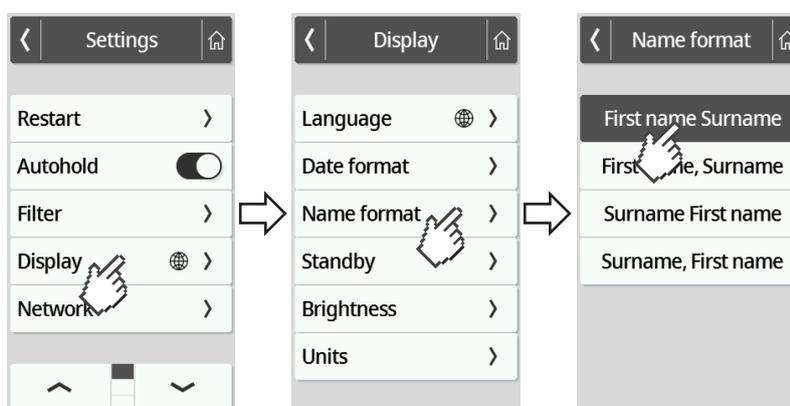
- To exit the menu, press the  key.

## Setting name format

Device mode	Function available
Basic	—
Advanced	•
Expert	•
Service	•

The format in which the names of patients and users are displayed can be set.

1. Press the  key.  
⇒ The **Settings** menu is displayed.
2. Press the  or  key until the **Display** menu item is displayed.
3. In the **Display** menu, select the **Name format** item.
4. Press the desired name format.  
⇒ The setting is active.



5. To exit the menu, press the  key.

## Setting standby time

Device mode	Function available
Basic	–
Advanced	•
Expert	•
Service	•

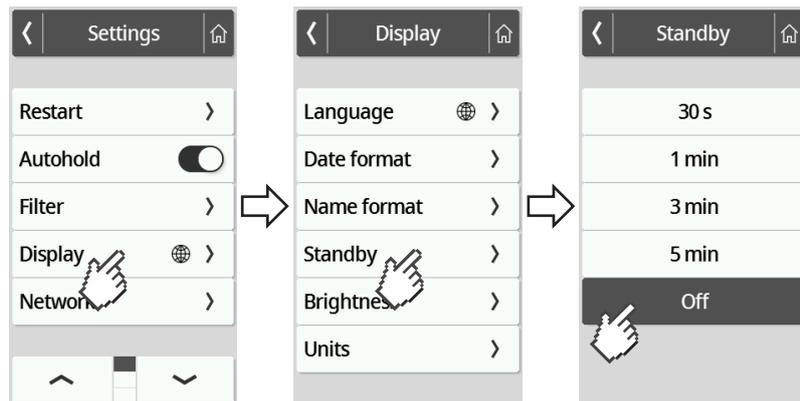
The time period after which the multifunctional display goes to standby mode can be set.

### **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 **Settings** menu is displayed.
2. Press the  or  key until the **Display** menu item is displayed.
3. In the **Display** menu, select the **Standby** item.
4. Press the desired setting.  
⇒ The setting is active.



### **NOTE**

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

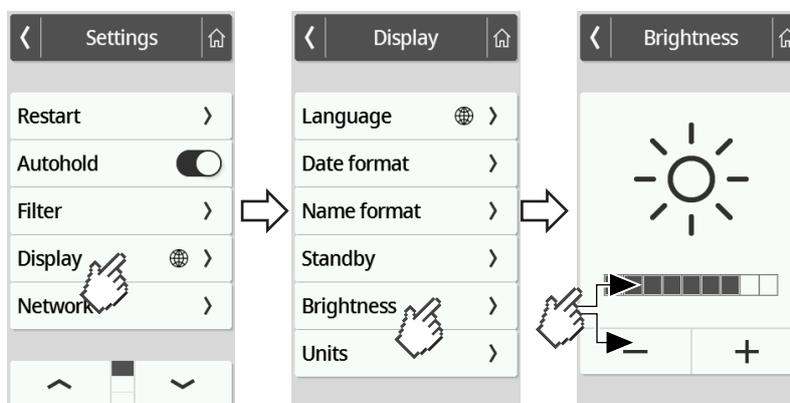
5. To exit the menu, press the  key.

## Setting display brightness

Device mode	Function available
Basic	–
Advanced	•
Expert	•
Service	•

Display brightness can be adjusted in stages (0 = off, 9 = max).

1. Press the  key.  
⇒ The **Settings** menu is displayed.
2. Press the  or  key until the **Display** menu item is displayed.
3. In the **Display** menu, select the **Brightness** item.
4. Adjust the brightness:
  - ▶ Press the plus/minus keys
  - ▶ Press the stages in the selection bar
  - ⇒ The setting is active.



5. To exit the menu, press the  key.

## Switching units

Device mode	Function available
Basic	–
Advanced	–
Expert	•
Service	•

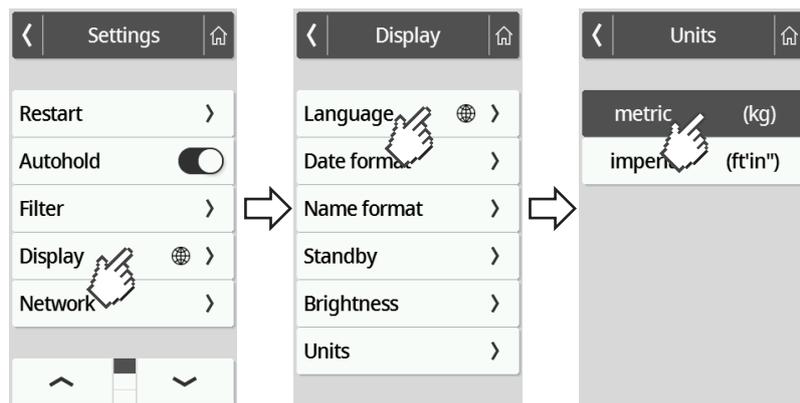


### CAUTION! Patient hazard

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

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

1. Press the  key.  
⇒ The **Settings** menu is displayed.
2. Press the  or  key until the **Display** menu item is displayed.
3. In the **Display** menu, select the **Units** item.
4. Press the desired system of units.



- ⇒ The setting is active.
- ⇒ Measured results are displayed in the selected system of units.

5. 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 if the device is connected to a network.

The following conditions must be met in order to be able to transmit measured values to the **seca analytics 125** software or to a third-party EMR System:

**seca analytics 125** software (direct connection):

- Device is connected to the server for the **seca analytics 125** software
- Device is connected to your network via a LAN or WiFi connection

### NOTE

In individual cases it may make sense not to connect the device directly to the **seca analytics 125** software, but rather via the **seca connect 103** software. This will be agreed during project preparation.

Third-party EMR System (via **seca connect 103**):

- Device is connected to the server for the **seca connect 103** software
- An interface to the EMR System has been set up in the **seca connect 103** software – in agreement with the third-party supplier
- Device is connected to your network via a LAN or WiFi connection
- A barcode scanner is connected to the device

Once the connection has been made, measurement consists of the following steps:

- Record ID(s) using the barcode scanner; alternatively, if connected directly to **seca analytics 125**: Submit IDs to the device
- Record measured values on the device
- Use the **seca connect 103** software to transmit measured results to the EMR System

### NOTE

Individual settings for the measurement can be made in the **seca connect 103** software or the **seca analytics 125** software. These settings are agreed during project preparation and set up by seca Service.

## Entering server address

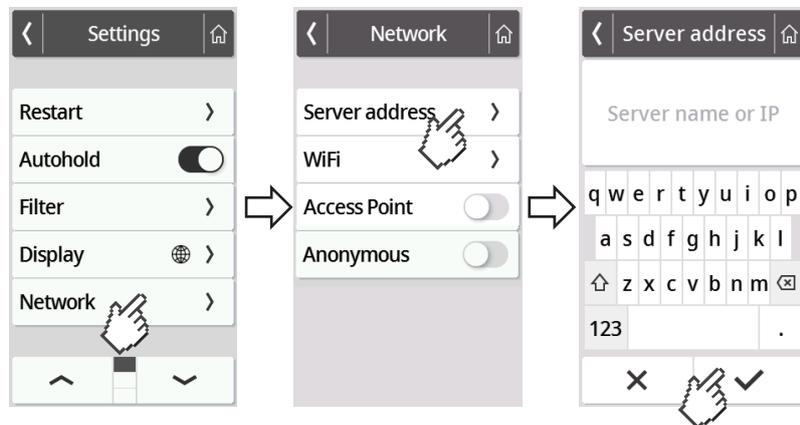
Device mode	Function available
Basic	–
Advanced	–
Expert	•
Service	•

In order to be able to use network functions, the device must be connected to one of the following servers - depending on your individual application:

- **seca connect 103**, local installation: Local server on which the **seca connect 103** software is installed.
- **seca connect 103**, cloud installation: Cloud server (you will have received access data during project implementation)
- **seca analytics 125**, cloud installation: Cloud server (you will have received access data during project implementation)

Which of the options mentioned applies to your application will have been agreed during project preparation.

1. Press the  key.  
⇒ The **Settings** menu is displayed.
2. Press the  or  key until the **Network** menu item is displayed.
3. Press the **Network** item.
4. Press the **Server address** item.
5. Enter the IP address of the server or the server name (DNS):
  - a) Enter the value
  - b) Confirm your entry by pressing the  key



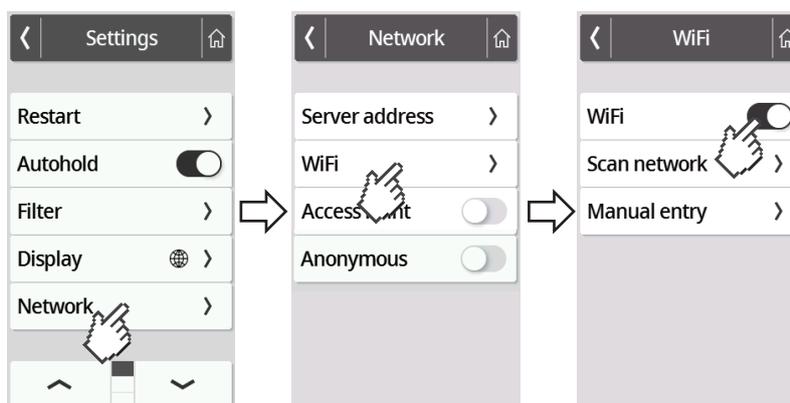
6. You have the following options for continuing:
  - ▶ LAN: Connect the device to the network using a LAN cable
  - ▶ Establish a WiFi connection → [Connecting the device to a WiFi network, page 65](#)

### Activating/deactivating the WiFi function

Device mode	Function available
Basic	–
Advanced	–
Expert	•
Service	•

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

1. Press the  key.  
⇒ The **Settings** menu is displayed.
2. Press the  or  key until the **Network** menu item is displayed.
3. Press the **Network** item.  
⇒ The current setting is displayed:



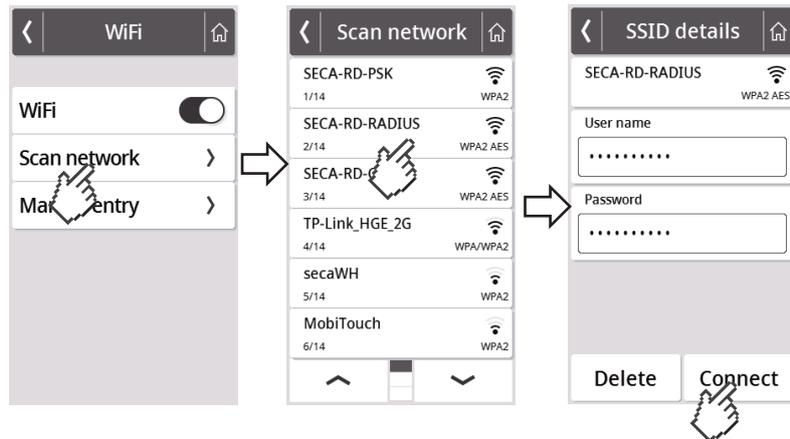
4. Press the desired setting for the **WiFi** item:
  -  Function activated
  -  Function deactivated
5. To exit the menu, press the  key.

### Connecting the device to a WiFi network

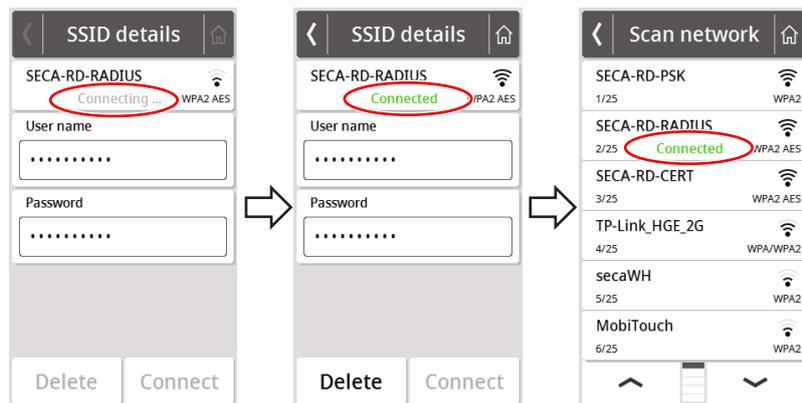
Device mode	Function available
Basic	–
Advanced	–
Expert	•
Service	•

1. Ensure that there is no LAN connection - disconnect the LAN cable from the device if there is one.
2. Ensure that the WiFi function of the device is activated → [Activating/deactivating the WiFi function, page 65](#).
3. Press the  key.  
⇒ The **Settings** menu is displayed.
4. Press the  or  key until the **WiFi** menu item is displayed.
5. Press the **WiFi** menu item.  
⇒ You have the following options for continuing:
  - ▶ Search for network automatically (recommended and described below)
  - ▶ Integrate device in a WiFi network manually

- Press the **Scan network** menu item.  
⇒ The device searches for available WiFi networks. This may take a moment.

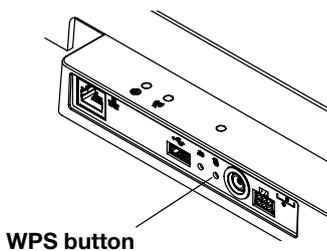


- Press the network you wish to use (here: "SECA-RD-RADIUS" with encryption standard "WPA2 AES").
- Enter the user name and password for the WiFi network by pressing the relevant text field.
- Press the **Connect** key.



- ⇒ The device connects (**Connecting**) to the router of the WiFi network.
- ⇒ As soon as the device is connected to the WiFi network, the message **Connected** is permanently on.

### Connecting the device to a WiFi network (WPS)



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.

- Ensure that the WiFi function of the device is activated → [Activating/deactivating the WiFi function, page 65](#).
- 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.

## Permitting anonymous measurements

Device mode	Function available
Basic	–
Advanced	–
Expert	–
Service	•

If the device is connected to a suitable EMR System via the **seca connect 103** software, you can permit anonymous measurements. If you activate this function, the device does not request user ID or patient data (date of birth, patient ID).



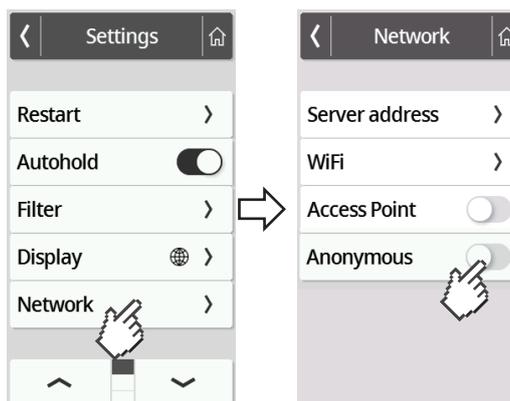
### WARNING!

#### Incorrect assignment of measured results, data loss

If measured results are incorrectly assigned or lost, this will lead to misinterpretations and consequently to misdiagnoses.

- ▶ Ensure that your work environment supports anonymous measurements so that clear assignment of measured results is always assured.
- ▶ Use this function only in consultation with seca Service.

1. Press the  key.  
⇒ The **Settings** menu is displayed.
2. Press the  or  key until the **Network** menu item is displayed.
3. Press the **Network** item.  
⇒ The current setting is displayed.



4. Press the desired setting for the **Anonymous** item:
  -  Function activated
  -  Function deactivated
5. To exit the menu, press the  key.

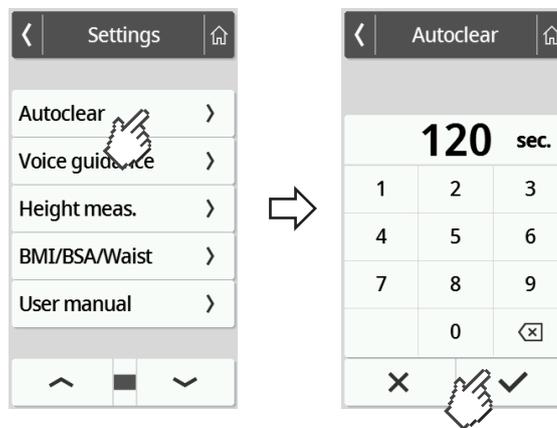
**Automatically clearing measured values (Autoclear)**

Device mode	Function available
Basic	–
Advanced	–
Expert	•
Service	•

Out-of-date measured results and patient data lead to incorrect calculation of BMI or BSA or to implausible bioimpedance analyses. The period of time after which the following parameters are cleared automatically can be set:

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

1. Press the  key.  
⇒ The **Settings** menu is displayed.
2. Press the  or  key until the **Autoclear** menu item is displayed.
3. Press the **Autoclear** item.
4. Specify the time after which the device is to discard measured results and patient data:
  - a) Enter value (minimum: 1 sec./maximum: 3600 sec./1 h)
  - b) Confirm your entry by pressing the  key



5. To exit the menu, press the  key.

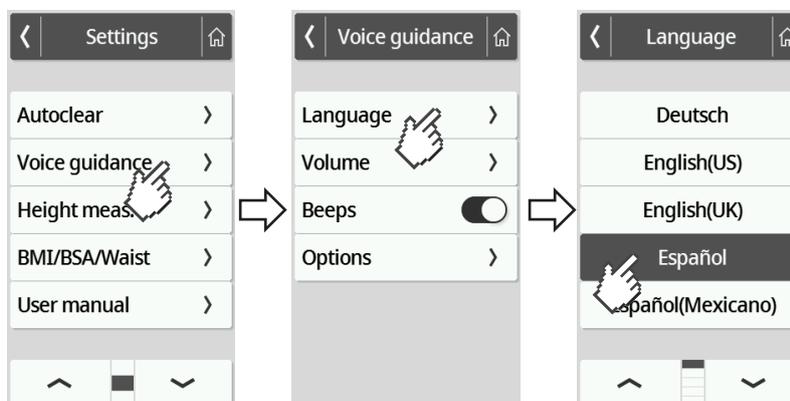
## 7.5 Configuring voice guidance (devices with ultrasonic measuring rod)

### Selecting language

Device mode	Function available
<b>Basic</b>	–
<b>Advanced</b>	•
<b>Expert</b>	•
<b>Service</b>	•

To change the language, proceed as follows:

1. Press the  key.  
⇒ The **Settings** menu is displayed.
2. Press the  or  key until the **Voice guidance** menu item is displayed.
3. In the **Voice guidance** menu, select the **Language** item.



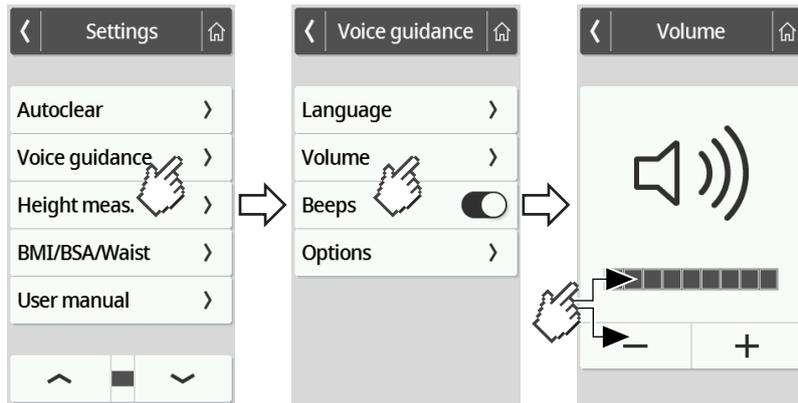
4. Select a language.
  - a) Press the arrow keys until the desired language appears on the display
  - b) Press the desired language  
⇒ The setting is active.
5. To exit the menu, press the  key.

### Setting the volume

Device mode	Function available
<b>Basic</b>	–
<b>Advanced</b>	•
<b>Expert</b>	•
<b>Service</b>	•

Voice output volume can be adjusted in stages (0 = off, 9 = max.).

1. Press the  key.  
⇒ The **Settings** menu is displayed.
2. Press the  or  key until the **Voice guidance** menu item is displayed.
3. From the **Voice guidance** menu, select the **Volume** item.



4. Adjust volume:
  - ▶ Press the plus/minus keys
  - ▶ Press the stages in the selection bar
  - ⇒ The setting is active.

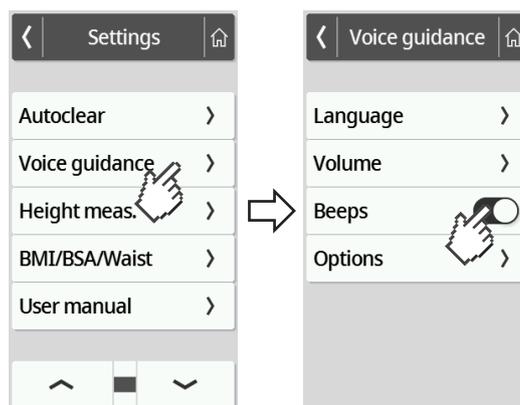
5. To exit the menu, press the  key.

### Activating/deactivating beeps

Device mode	Function available
Basic	–
Advanced	–
Expert	•
Service	•

Beeps can be activated for height measurement to indicate the beginning and end of a measurement procedure.

1. Press the  key.  
⇒ The **Settings** menu is displayed.
2. Press the  or  key until the **Voice guidance** menu item is displayed.
3. In the **Voice guidance** menu, select the **Beeps** item.



4. Select the desired setting for the **Beeps** item:

- Function activated: 
- Function deactivated: 

5. To exit the menu, press the  key.

### Activating/deactivating announcement of patient instructions (Measurement)

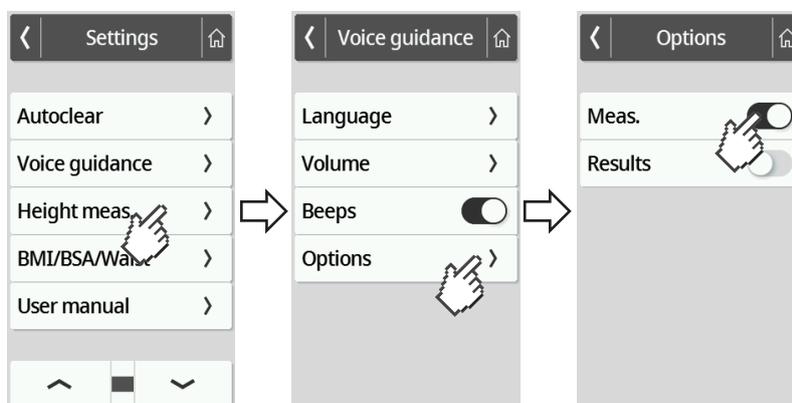
Device mode	Function available
Basic	–
Advanced	–
Expert	•
Service	•

The device can be set so that the patient is guided through the measurement procedure by voice output.

#### NOTE

Select a language the patient understands → [Selecting language, page 69](#).

1. Press the  key.  
⇒ The **Settings** menu is displayed.
2. Press the  or  key until the **Voice guidance** menu item is displayed.
3. In the **Voice guidance** menu, select the **Options** item.



4. Select the desired setting for the **Meas.** item:
  - Function activated: 
  - Function deactivated: 
5. To exit the menu, press the  key.

### Activating/deactivating announcement of measured results (Results)

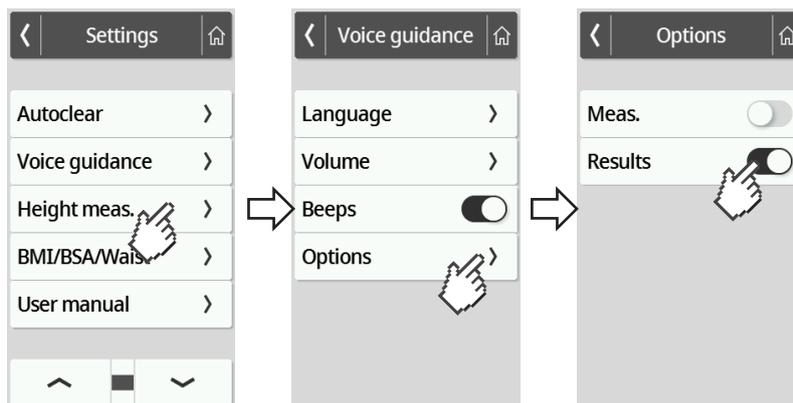
Device mode	Function available
Basic	–
Advanced	–
Expert	•
Service	•

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

#### NOTE

Select a language the patient understands → [Selecting language, page 69](#).

1. Press the  key.  
⇒ The **Settings** menu is displayed.
2. Press the  or  key until the **Voice guidance** menu item is displayed.
3. In the **Voice guidance** menu, select the **Options** item.



4. Select the desired setting for the **Results** item:

- Function activated: 
- Function deactivated: 

5. To exit the menu, press the  key.

## 7.6 Factory settings

### Overview of factory settings

Function	Factory setting
<b>General</b>	
Hold	Off
Tare	0 kg
Pre-tare	0 kg
Height	0 cm
Autohold	Off
Device mode	Expert
Autoclear <sup>a</sup>	300 sec.
Auto off (only with <b>seca 453</b> battery pack)	5 min.
Filter	Low
Display: Language	English
Display: Date format	YYYY/MM/DD
Display: Name format	First name Sur-name
Display: Standby	Off
Display: Brightness	Stage 7 of 9
BMI/BSA/Waist	BMI
Units	Metric (kg, cm)
Server address <sup>a</sup>	None
WiFi <sup>a</sup>	On
Access Point <sup>a</sup>	Off
Anonymous	Off
<b>Voice guidance (devices with ultrasonic measuring rod)</b>	
Voice guidance: Language	English
Voice guidance: Volume	Stage 5 of 9

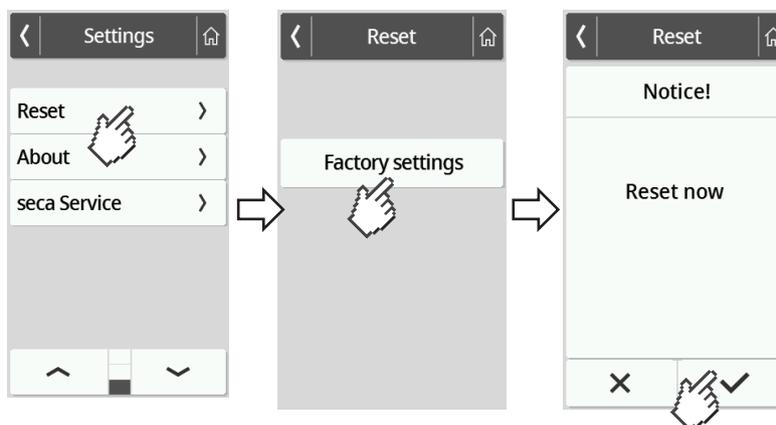
Function	Factory setting
Voice guidance: Beeps Beeps	On
Voice guidance: Meas.	On
Voice guidance: Results	On

<sup>a</sup> Individual setting is **not** reset to factory settings.

## Restoring factory settings

Device mode	Function available
Basic	–
Advanced	–
Expert	•
Service	•

1. Press the  key.  
⇒ The **Settings** menu is displayed.
2. Press the  or  key until the **Reset** menu item is displayed.
3. Press the **Reset** item.



4. Press the **Factory settings** key.
5. Press the  key.  
⇒ The device will be reset to factory settings.  
⇒ The main screen is displayed again.

### NOTE

The following network settings are **not** reset:

- Autoclear
- Server address
- Server port
- WiFi
- Access Point

## 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 for 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
<b>Before</b> each measurement	<ul style="list-style-type: none"><li>• Weighing platform</li><li>• Handrail (devices with handrail)</li></ul>
<b>After</b> each measurement	<ul style="list-style-type: none"><li>• Weighing platform</li><li>• Handrail (devices with handrail)</li></ul>
As required	<ul style="list-style-type: none"><li>• Multifunctional display</li><li>• Column (devices with ultrasonic measuring rod)</li><li>• Head slide and measuring flap (devices with digital measuring rod)</li></ul>

### 8.3 Sterilizing

The device must not be sterilized.

## 9 FUNCTION CHECK

- ▶ 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, first try to remedy the fault with the aid of the “Troubleshooting” section in this document.



### 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.

## 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.

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 83](#)
- → [Error codes, page 83](#)

### 10.1 General faults

Fault	Cause	Remedy
No menu access possible	<b>Basic</b> device mode active	Clarify with the administrator/hospital technician whether the device can be operated in a different device mode <ul style="list-style-type: none"> <li>• → <a href="#">Changing device mode, page 49</a></li> <li>• → <a href="#">Functions/device mode, page 88</a></li> </ul>
Required function not available	Device mode in which the function is not provided is active	Clarify with the administrator/hospital technician whether the device can be operated in a different device mode <ul style="list-style-type: none"> <li>• → <a href="#">Changing device mode, page 49</a></li> <li>• → <a href="#">Functions/device mode, page 88</a></li> </ul>
Multifunctional display does not react when keys are pressed	Device is in an undefined state following implausible input	<ul style="list-style-type: none"> <li>• → <a href="#">Restarting the device, page 81</a></li> <li>• If the error recurs, inform seca Service</li> </ul>
	With combinations of devices involving a handrail and/or measuring rod: Additional display connected	<ul style="list-style-type: none"> <li>• → <a href="#">Restarting the device, page 81</a></li> <li>• If the error recurs, inform seca Service</li> </ul>

Fault	Cause	Remedy
Multifunctional display remains dark after pressing	No connection to weighing platform	<ul style="list-style-type: none"> <li>• Check whether the display cable is connected correctly</li> <li>• If the error recurs, inform seca Service</li> </ul>
	No power supply: <ul style="list-style-type: none"> <li>• No plug-in power supply unit connected</li> <li>• On devices with optional battery pack: Battery pack discharged</li> </ul>	<ul style="list-style-type: none"> <li>• Check whether the plug-in power supply unit is connected correctly</li> <li>• On devices with optional battery pack: → <a href="#">Charging optional battery pack, page 31</a></li> <li>• If the error recurs, inform seca Service</li> </ul>
	Device is in an undefined state following implausible input	<ul style="list-style-type: none"> <li>• → <a href="#">Restarting the device, page 81</a></li> <li>• If the error recurs, inform seca Service</li> </ul>
	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	<ul style="list-style-type: none"> <li>• Remove the weight from the weighing platform</li> <li>• Press <b>Weight</b> display field</li> <li>• → <a href="#">Restarting the device, page 81</a></li> <li>• Wait until main screen is displayed again</li> </ul>
	Weighing electronics defective	Inform seca Service
<b>Autohold</b> function cannot be deactivated	Device is connected to a network (intended behavior): <b>Autohold</b> function is activated automatically	If necessary, disconnect device from network
<b>001-272XX-XXX</b> to <b>008-272XX-XXX</b>	Load cell or weight calculation module defective	Inform seca Service
<b>010-272XX-XXX</b>	Scale has been switched on with too high a load	<ul style="list-style-type: none"> <li>• → <a href="#">Restarting the device, page 81</a></li> <li>• If the error recurs, inform seca Service</li> </ul>
<b>013-272XX-XXX</b>	Scale was caused to oscillate and was unable to determine the zero point	<ul style="list-style-type: none"> <li>• → <a href="#">Restarting the device, page 81</a></li> <li>• If the error recurs, inform seca Service</li> </ul>
<b>016-272XX-XXX</b>	Maximum capacity exceeded	Ask patient to step off the scale
<b>019-272XX-XXX</b>	Ambient temperature too high or too low	<ul style="list-style-type: none"> <li>• Observe ambient conditions for operation, transport, and storage → <a href="#">General technical data, page 89</a></li> </ul>
<b>020-272XX-XXX</b> to <b>023-272XX-XXX</b>	One corner of the scale has been loaded excessively	<ul style="list-style-type: none"> <li>• Distribute weight evenly</li> </ul>
		<ul style="list-style-type: none"> <li>• → <a href="#">Restarting the device, page 81</a></li> <li>• If the error recurs, inform seca Service</li> </ul>
<b>024-272XX-XXX</b>	No GAL value	Inform seca Service

## 10.3 Ultrasonic height measurement

Fault/error code	Cause	Remedy
 symbol appears during calibration	Calibration failed	<ul style="list-style-type: none"> <li>• Ensure that no objects or people are in the immediate vicinity of the device during calibration</li> <li>• Ensure that the supplied calibration rod was used</li> <li>• Ensure that the calibration rod is positioned centrally on the foot silhouettes of the weighing platform</li> </ul>
Ultrasound measuring head power LED does not light up	Device is in an undefined state following implausible input	<ul style="list-style-type: none"> <li>• → <a href="#">Restarting the device, page 81</a></li> <li>• If the error recurs, inform seca Service</li> </ul>
	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 input	<ul style="list-style-type: none"> <li>• → <a href="#">Restarting the device, page 81</a></li> <li>• If the error recurs, inform seca Service</li> </ul>
	Foot silhouette illumination is defective	Inform seca Service
Patient instructions are not announced	Function not activated	Activate function → <a href="#">Activating/deactivating announcement of patient instructions (Measurement), page 71</a>
	Volume set to zero	Increase volume → <a href="#">Setting the volume, page 69</a>
	Loudspeaker is defective	Inform seca Service
No beeps audible	Function not activated	Activate function → <a href="#">Activating/deactivating beeps, page 70</a>
	Volume set to zero	Increase volume → <a href="#">Setting the volume, page 69</a>
	Loudspeaker is defective	Inform seca Service
Measured results are not announced	Function not activated	Activate function → <a href="#">Activating/deactivating announcement of measured results (Results), page 71</a>
	Volume set to zero	Increase volume → <a href="#">Setting the volume, page 69</a>
	Loudspeaker is defective	Inform seca Service
<b>080-297XX-XXX</b>	Voice output memory cannot be read	Inform seca Service Deactivate beeps and voice output to suppress the error message until repair is carried out: <ul style="list-style-type: none"> <li>• Deactivate announcement of patient instructions → <a href="#">Activating/deactivating announcement of patient instructions (Measurement), page 71</a></li> <li>• Deactivate announcement of measured results → <a href="#">Activating/deactivating announcement of measured results (Results), page 71</a></li> <li>• Deactivate beeps → <a href="#">Activating/deactivating beeps, page 70</a></li> </ul>
<b>081-297XX-XXX</b>	Voice file not found	Inform seca Service

Fault/error code	Cause	Remedy
		Deactivate beeps and voice output to suppress the error message until repair is carried out: <ul style="list-style-type: none"> <li>Deactivate announcement of patient instructions → <a href="#">Activating/deactivating announcement of patient instructions (Measurement)</a>, page 71</li> <li>Deactivate announcement of measured results → <a href="#">Activating/deactivating announcement of measured results (Results)</a>, page 71</li> <li>Deactivate beeps → <a href="#">Activating/deactivating beeps</a>, page 70</li> </ul>
<b>082-297XX-XXX</b>	An error occurred during the measurement	Repeat measurement and ask the patient to keep still
		If the error recurs, inform seca Service
<b>083-297XX-XXX</b>	An error occurred during calibration	<ul style="list-style-type: none"> <li>Remove objects from the immediate vicinity of the device.</li> <li>Ask people in the vicinity to stay further away from the device</li> </ul>
	Interference caused by reflection	
	Interference caused by other ultrasonic emitters	Increase the distance from other ultrasonic emitters
<b>084-297XX-XXX</b>	Ambient temperature too high or too low	Observe ambient conditions for operation, transport, and storage → <a href="#">General technical data</a> , page 89
	Temperature sensor is defective	Inform seca Service
<b>099-297XX-XXX</b>	Voice guidance: Language that does not support the announcement of measured results in imperial units is active, announcement of measured results deactivated automatically	<ul style="list-style-type: none"> <li>Set metric units → <a href="#">Switching units</a>, page 62</li> <li>Activate announcement of measured results → <a href="#">Activating/deactivating announcement of measured results (Results)</a>, page 71</li> </ul>
		<ul style="list-style-type: none"> <li>Select a language that does support the announcement of measured results in imperial units: EN-US, EN-UK, ES-MX, ES-SP → <a href="#">Selecting language</a>, page 69</li> <li>Activate announcement of measured results → <a href="#">Activating/deactivating announcement of measured results (Results)</a>, page 71</li> </ul>

## 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 <b>seca 453</b> 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	<ul style="list-style-type: none"> <li>Remove greasy substances</li> <li>Do not use hand creams or moisturizing disinfectants immediately before a measurement</li> </ul>
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 → <a href="#">Measuring heights &lt; 1.22 m, page 41</a>
Head slide is hard to move	Swarf on the column or on the sliding surfaces of the head slide	Clean column → <a href="#">Hygiene treatment, page 74</a>
<b>004-320XX-XXX</b>	No connection between electronic module and external sensors	Inform seca Service

## 10.5 Data transmission

Fault/error code	Cause	Remedy
The "Date of birth" dialog window appears after the  key is pressed	Patient ID not scanned	<ul style="list-style-type: none"> <li>Press the  key</li> <li>Scan patient ID</li> </ul>
	ID scanning not set up	Check Workflow settings for the <b>seca connect 103</b> or <b>seca analytics 125</b> software
	Patient does not yet have a file in the EMR System	<ul style="list-style-type: none"> <li>Enter date of birth and press  key again</li> <li>Create patient file in the EMR System and assign measurement</li> </ul>
	Device is connected to the <b>seca analytics 125</b> software	<ul style="list-style-type: none"> <li>Enter date of birth</li> <li>Press the  key</li> </ul>
After the  key is pressed, there is no request for patient or user data	ID(s) scanned at the start of the measurement	<ul style="list-style-type: none"> <li>Not a malfunction, measured results are assigned to the patient and saved in the EMR System</li> <li>Check assignment in EMR System</li> </ul>
	ID scanning not set up	Check Workflow settings for the <b>seca connect 103</b> or <b>seca analytics 125</b> software
	<b>Anonymous</b> function activated	<ul style="list-style-type: none"> <li>Not a malfunction, measured results are sent to the EMR System</li> <li>In the EMR System, ensure that measured results are correctly assigned</li> </ul>
 icon appears	An obligatory measurement has not been performed	<ul style="list-style-type: none"> <li>Press the  key</li> <li>Perform the missing measurement</li> </ul>
	Scanned ID is invalid	Scan valid ID

Fault/error code	Cause	Remedy
 icon appears	Optional measured value (e.g. height) has not been determined	<ul style="list-style-type: none"> <li>Press <b>X</b> key and determine optional measured value</li> <li>Press <b>✓</b> key and end measurement</li> <li>If desired: Check Workflow settings for the <b>seca connect 103</b> or <b>seca analytics 125</b> software</li> </ul>
 icon appears	Optional ID (e.g. user ID) has been scanned	If desired: Check Workflow settings for the <b>seca connect 103</b> or <b>seca analytics 125</b> software
<b>✓</b> key appears grayed out	There are no data available to be confirmed	<ul style="list-style-type: none"> <li>Perform a measurement</li> <li>Scan IDs (user/patient)</li> </ul>
<b>X</b> key appears grayed out	There are no data available to be cleared	<ul style="list-style-type: none"> <li>Perform a measurement</li> <li>Scan IDs (user/patient)</li> </ul>
Autoclear 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	<ul style="list-style-type: none"> <li>Accept factory setting</li> <li>Manually enter value between 1 and 3600 seconds</li> </ul>
Workflow LED does not light up	Measurement not yet started	Start measurement (→ <a href="#">Starting the measurement procedure, page 34</a> )
	No network connection	Set up network connection → <a href="#">Setting up network functions, page 63</a>
	WiFi function deactivated	Activate the WiFi function → <a href="#">Activating/deactivating the WiFi function, page 65</a>
	Workflow LED defective	Inform seca Service
Workflow LED illuminated 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 measured results to the clipboard	Repeat measurement
	Measured results have not been sent to an EMR System or to seca software	<ul style="list-style-type: none"> <li>Repeat measurement</li> <li>Check WiFi connection</li> </ul>
<b>001-288XX-XXX</b>	No connection to the server	<ul style="list-style-type: none"> <li>Check LAN cable</li> <li>Check network settings → <a href="#">Setting up network functions, page 63</a></li> </ul>
<b>002-288XX-XXX</b>	No data transmission possible	<ul style="list-style-type: none"> <li>Check network settings → <a href="#">Setting up network functions, page 63</a></li> <li>Check Workflow settings for the <b>seca connect 103</b> or <b>seca analytics 125</b> software</li> </ul>
<b>004-288XX-XXX</b>	Barcode scanned at the wrong time	Repeat measurement and maintain correct operating sequence
		<ul style="list-style-type: none"> <li>→ <a href="#">Restarting the device, page 81</a></li> <li>If the error recurs, inform seca Service</li> </ul>
<b>005-288XX-XXX</b>	Barcode invalid or damaged	Use a valid, undamaged barcode
	Patient ID/user ID not found	In the database ( <b>seca analytics 125</b> or EMR System): <ul style="list-style-type: none"> <li>Create patient file</li> <li>Create user account</li> </ul>
<b>006-288XX-XXX</b>	Unable to transmit measurement to EMR System	Check Workflow settings for the <b>seca connect 103</b> or <b>seca analytics 125</b> software
<b>010-288XX-XXX</b>	Update failed	<ul style="list-style-type: none"> <li>Restart update</li> <li>If the error recurs, inform seca Service</li> </ul>

Fault/error code	Cause	Remedy
019-288XX-XXX	Overcurrent at USB interface of weighing platform	<ul style="list-style-type: none"> <li>Check connected USB device</li> <li>If the error recurs, do not use the USB device</li> </ul>
020-288XX-XXX 022-288XX-XXX	No connection to <b>seca connect 103</b> software	<ul style="list-style-type: none"> <li>Repeat measurement</li> <li>Check Workflow settings for the <b>seca connect 103</b> or <b>seca analytics 125</b> software</li> </ul>
050-280XX-XXX	Overcurrent at USB interface of multifunctional display	<ul style="list-style-type: none"> <li>Check connected USB device</li> <li>If the error recurs, do not use the USB device</li> </ul>
052-280XX-XXX	Internal device communication error	<ul style="list-style-type: none"> <li>→ <a href="#">Restarting the device, page 81</a></li> <li>If the error recurs, inform seca Service</li> </ul>
053-280XX-XXX	Communication error between weighing platform and multifunctional display	<ul style="list-style-type: none"> <li>→ <a href="#">Restarting the device, page 81</a></li> <li>If the error recurs, inform seca Service</li> </ul>

## 10.6 Restarting the device

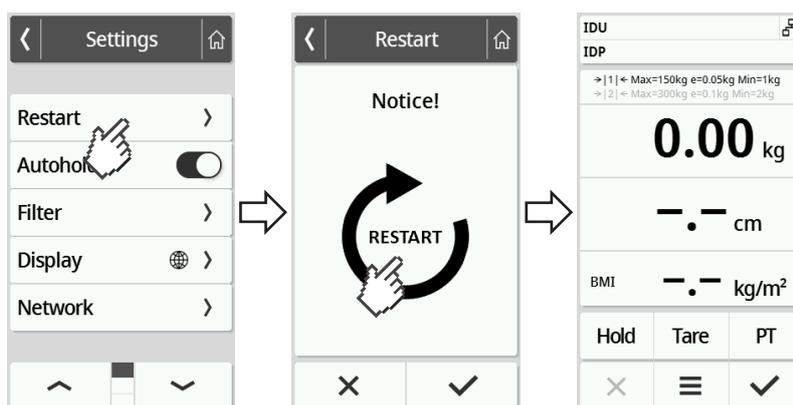
In individual cases (e.g. following implausible input) it may be necessary to restart the device. To do so, use the **Restart** function in the menu or interrupt the power supply and then restore it.

### 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 72](#)

### Using the “Restart” menu function

- Make sure that there is no load on the weighing platform.
- Press the  key.  
⇒ The **Settings** menu is displayed.
- Press the  or  key until the **Restart** menu item is displayed.

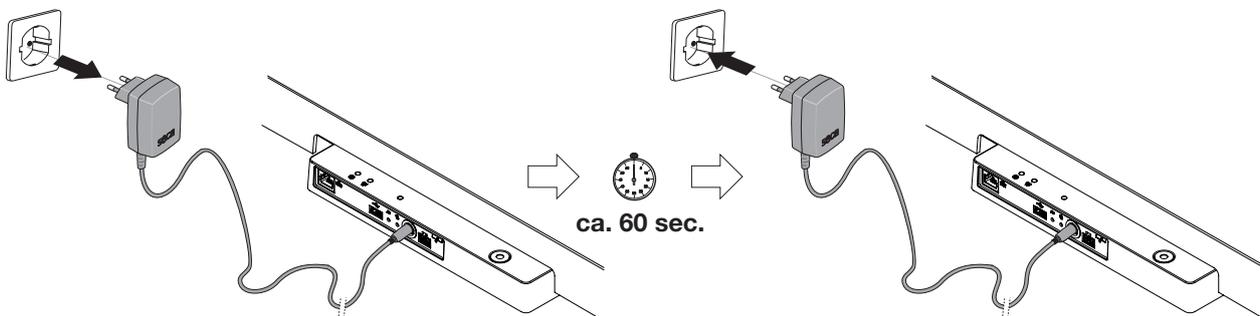


- Press the **Restart** item.
- Press the  symbol.  
⇒ The device restarts.
- Wait until the main screen is displayed again.  
⇒ The device is ready for operation.

### 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.



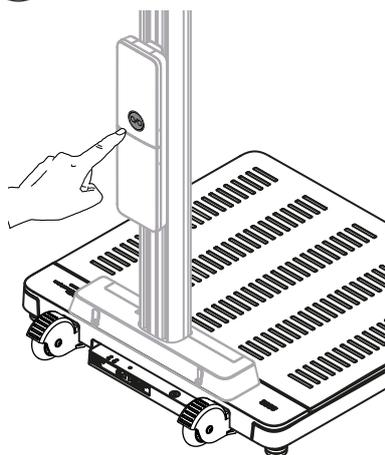
4. Plug the power supply unit back into the socket.
  - ⇒ The device and the multifunctional display switch on automatically.
  - ⇒ The device is ready for operation.

### 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.

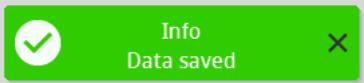


- ⇒ The multifunctional display goes out.
- ⇒ The device is switched off.

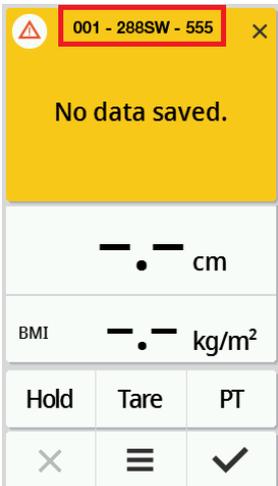
3. Release the  key and wait about a minute.

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

## 10.7 Traffic light system for display messages

Symbol	Description
	Green: Action successful, e.g. data sent to an EMR System or to the <b>seca analytics 125</b> software
	Yellow: Incorrect operation or malfunction, can be remedied by the user with the aid of the troubleshooting tables in these instructions for use (→ <a href="#">Troubleshooting, page 75</a> ).
	Red: Device error that cannot be remedied by the user, inform seca Service.

## 10.8 Error codes



**001 - 288SW - 555**

- Model number; here: seca mBCA 555 scale
- Firmware version of the assembly concerned; here: Index "W"
- Hardware version of the assembly concerned; here: Index "S"
- Assembly concerned; here: 288 = Interface module
- Error number; here: 001 = no connection to the server

# 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 a service partner in your vicinity at [www.seca.com](http://www.seca.com) or by emailing [service@seca.com](mailto:service@seca.com).

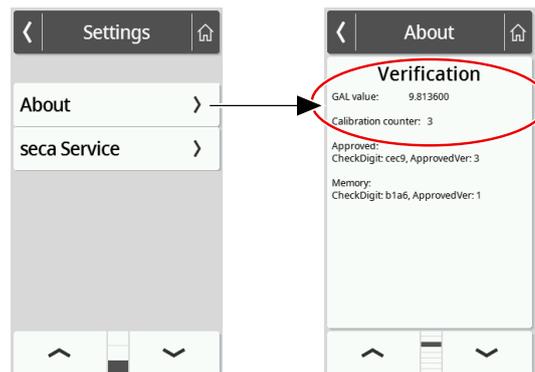
Have authorized persons perform verification in line with national legal regulations.

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  key.  
⇒ The **Settings** menu is displayed.
2. Press **About**.
3. Press the  or  key until the **Verification** menu item is displayed.



4. Read off the GAL value (figure shows example values).



5. Read off the verification counter.



⇒ The value must match the number indicated on the verification counter seal (figure shows example values).

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 a service partner in your vicinity at [www.seca.com](http://www.seca.com) or by emailing [service@seca.com](mailto:service@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

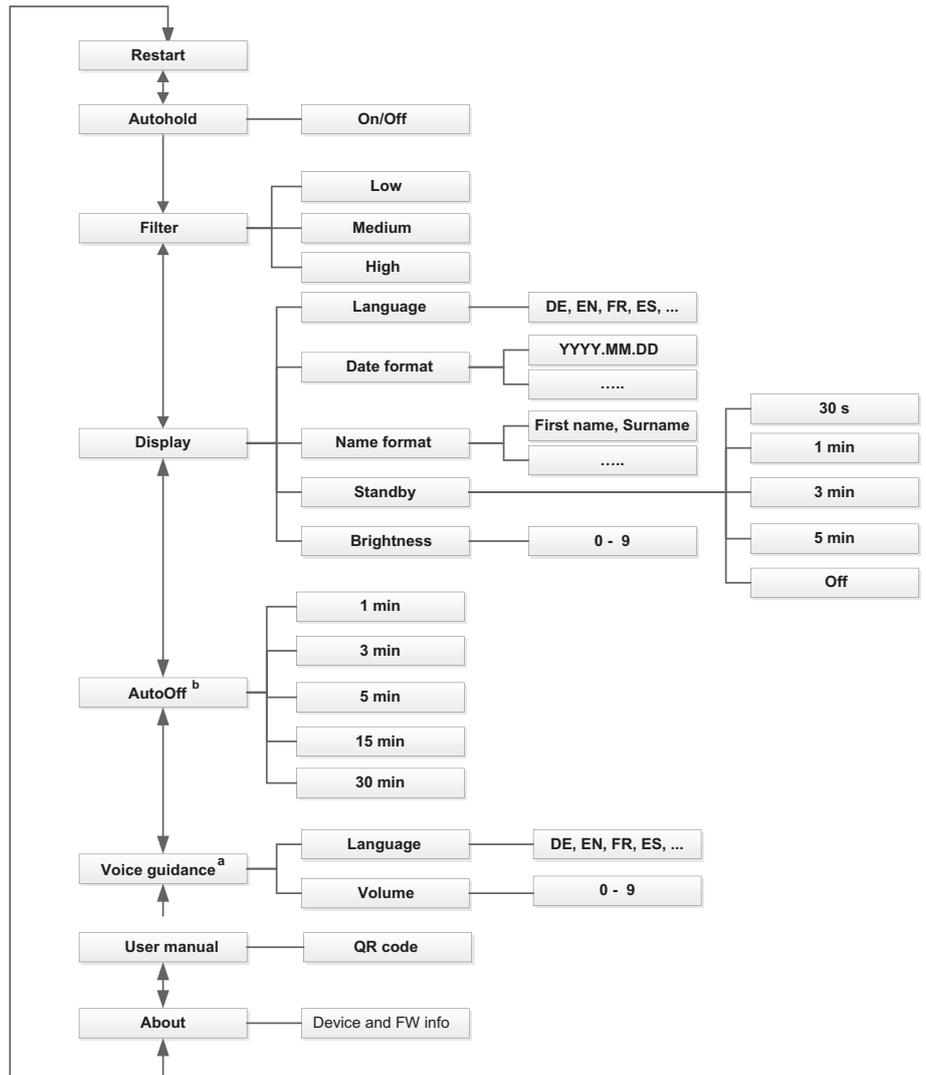
- ▶ Have servicing and repairs carried out exclusively by seca Service or an authorized service partner.
- ▶ You can find a service partner in your vicinity at [www.seca.com](http://www.seca.com) or by emailing [service@seca.com](mailto:service@seca.com).

# 12 TECHNICAL DATA

## 12.1 Menu structures

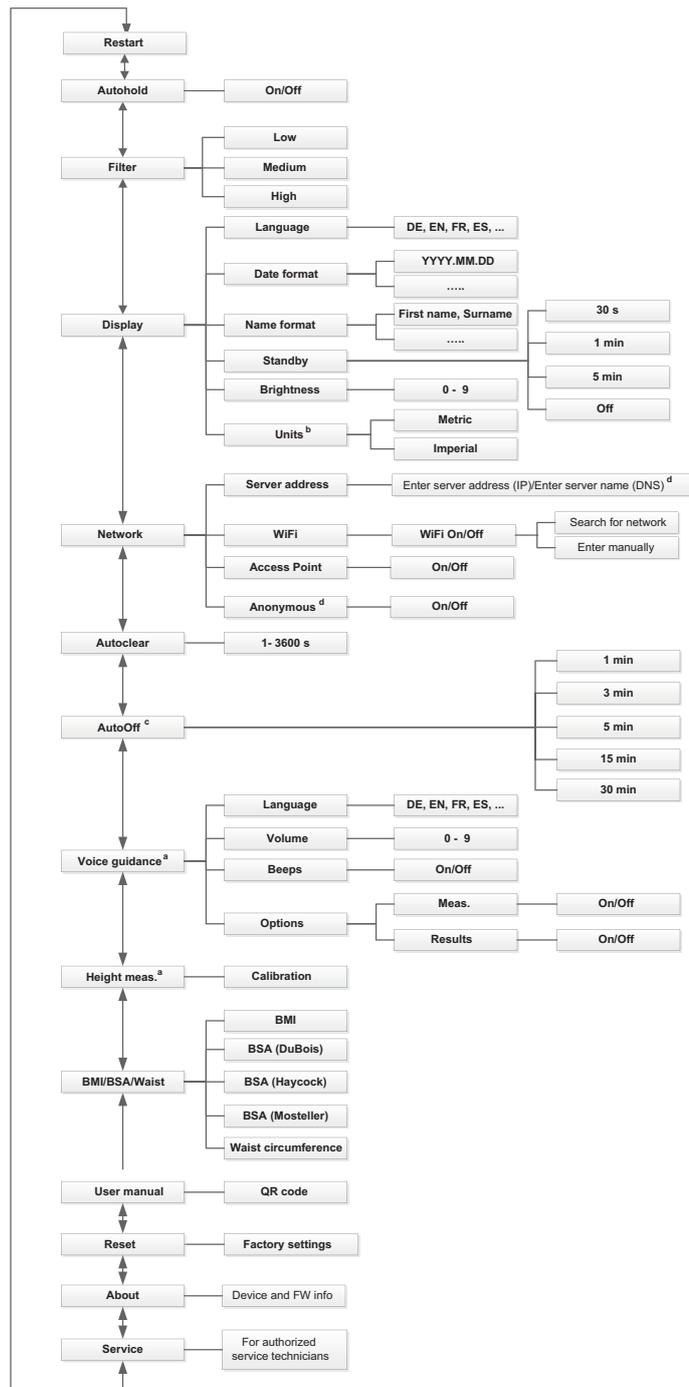
**“Basic” device mode** In **Basic** device mode, only the **Restart** menu item is available.

"Advanced" device mode



a For combinations of devices with ultrasonic measuring rod  
 b For combinations of devices with optional battery pack

"Expert"/"Service" device modes



a For combinations of devices with ultrasonic measuring rod  
 b Only for non-verified scales  
 c For combinations of devices with optional battery pack  
 d Only use in consultation with seca Service

## 12.2 Functions/device mode

Function	Device mode			
	Basic	Advanced	Expert	Service
<b>Measuring</b>				
Calculate <b>BMI/BSA</b> automatically	•	•	•	•
Measure weight	•	•	•	•
Record IDs (user/patient) <sup>a</sup>	•	•	•	•
Enter height manually	•	•	•	•
Measure height	•	•	•	•
Permanently display measured results ( <b>Hold</b> )	–	•	•	•
Submit measured results <sup>a</sup>	•	•	•	•
Enter waist circumference	–	•	•	•
Tare additional weight ( <b>Tare</b> )	–	•	•	•
Permanently save the additional weight ( <b>Pre-tare</b> )	–	•	•	•
<b>Configuring</b>				
Permit anonymous measurement <sup>a,b</sup>	–	–	–	•
Activate/deactivate announcement of measured results ( <b>Results</b> )	–	–	•	•
Activate/deactivate announcement of patient instructions ( <b>Meas.</b> )	–	–	•	•
Access PDF version of the instructions for use (QR code)	–	•	•	•
<b>Autoclear</b> function: Define time period	–	–	•	•
<b>Auto off</b> function: Specify time period (only with <b>seca 453</b> battery pack)	–	•	•	•
Activate <b>Autohold</b> function	–	•	•	•
Use <b>Restart</b> function	•	•	•	•
Set filter (sensitivity of the scale to patient movements)	–	•	•	•
Set date format	–	•	•	•
Set name format	–	•	•	•
Set display brightness	–	•	•	•
Set display language	–	•	•	•
Read off verification counter reading (verified scales)	–	•	•	•
Switch over units (non-verified scales)	–	–	•	•
Read off GAL value	–	•	•	•
Connect device to WiFi network (WPS)	–	–	•	•
Connect device to WiFi network (directly)	–	–	•	•
Connect devices to WiFi network ( <b>seca connect 103</b> )	–	–	•	•
With network connection: Enter server name (DNS)	–	–	•	•
Enter IP address of server	–	–	•	•
Set volume for voice guidance	–	•	•	•
Call up menu	–	•	•	•
Service functions <sup>c</sup>	–	–	–	•
Activate/deactivate beeps for ultrasonic height measurement	–	–	•	•
Select language for voice guidance	–	•	•	•

Function	Device mode			
	Basic	Advanced	Expert	Service
Set standby time	–	•	•	•
Calibrate ultrasonic measuring rod	–	–	•	•
Switch between BMI/BSA calculation and waist circumference input	–	–	•	•
Restoring factory settings	–	–	•	•
Activate/deactivate WiFi module	–	–	•	•

- <sup>a</sup> Devices with connection to an EMR System or the **seca analytics 125** software (directly or via **seca connect 103** software)
- <sup>b</sup> Only use following discussion with seca Service
- <sup>c</sup> For authorized service technicians only

## 12.3 General technical data

General technical data	
Ambient conditions, operation: <ul style="list-style-type: none"> <li>• Temperature</li> <li>• Air pressure</li> <li>• Humidity</li> </ul>	+10 °C to +40 °C (50 °F to 104 °F) 700 hPa – 1060 hPa 20 % – 80 %, no condensation
Ambient conditions, storage: <ul style="list-style-type: none"> <li>• Temperature</li> <li>• Air pressure</li> <li>• Humidity</li> <li>• Warm-up time from lowest storage temperature to operational temperature <ul style="list-style-type: none"> <li>– At ambient temperature 20 °C 8 h</li> <li>– At ambient temperature 20 °C with condensation 24 h</li> </ul> </li> <li>• Cooling time from highest storage temperature to operational temperature (at ambient temperature 20 °C) 8 h</li> </ul>	-10 °C to +65 °C (14 °F to 149 °F) 700 hPa – 1060 hPa 0 % – 95 %, no condensation
Ambient conditions, transport <ul style="list-style-type: none"> <li>• Temperature</li> <li>• Air pressure</li> <li>• Humidity</li> </ul>	-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 <ul style="list-style-type: none"> <li>• Supply voltage</li> <li>• Maximum current consumption</li> </ul>	12 V max. 1.5 A
Power supply voltage	100 V – 240 V
Power supply frequency	50 Hz – 60 Hz
Power consumption	max. 18 W
Power supply: optional <b>seca 453</b> battery pack <ul style="list-style-type: none"> <li>• Running time (display brightness: 80 %)</li> <li>• Charging time (discharged -&gt; fully charged)</li> <li>• Charging method</li> </ul>	Approx. 8 h Approx. 3 h Plug-in power supply unit for scale
IEC 60601-1: Medical electrical device, Type BF	
Type of protection to IEC 60529	IP 21
Duty cycle	Continuous duty
Medical device in accordance with Regulation (EU) 2017/745:	Class I with measuring function

General technical data	
Application parts to IEC 60601-1: <ul style="list-style-type: none"> <li>• <b>seca 655/654</b> scales</li> <li>• <b>seca 455</b> handrail</li> <li>• <b>seca 254</b> digital telescopic measuring rod</li> </ul>	Multifunctional display, glass plate Upper handrail arch Head slide, measuring flap
Interfaces: <ul style="list-style-type: none"> <li>• USB</li> <li>• WiFi</li> <li>• LAN</li> <li>• Internal bus system/multifunctional display</li> </ul>	USB 2.0, max. 500 mA 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

## 12.4 Dimensions and weights

Dimensions and weights	
<b>Scale with handrail</b>	
Dimensions: <ul style="list-style-type: none"> <li>• Depth</li> <li>• Width</li> <li>• Height</li> </ul>	653 mm 801 mm 1280 mm
Net weight	Approx. 25 kg
<b>Scale with ultrasonic measuring rod</b>	
Dimensions: <ul style="list-style-type: none"> <li>• Depth</li> <li>• Width</li> <li>• Height (standard/short column)</li> </ul>	614 mm 600 mm 2387 mm/2187 mm
Net weight	Approx. 22 kg
<b>Scale with handrail and ultrasonic measuring rod</b>	
Dimensions: <ul style="list-style-type: none"> <li>• Depth</li> <li>• Width</li> <li>• Height (standard/short column)</li> </ul>	650 mm 801 mm 2387 mm/2187 mm
Net weight	Approx. 29 kg
<b>Scale with handrail and digital telescopic measuring rod</b>	
Dimensions: <ul style="list-style-type: none"> <li>• Depth</li> <li>• Width</li> <li>• Height (measuring rod retracted/extended)</li> </ul>	636 mm 801 mm 1299 mm/2367 mm
Net weight	Approx. 26 kg

## 12.5 Weight measurement

Verified model	
Verification in line with Directive 2014/31/EU	Class III
Maximum capacity <ul style="list-style-type: none"> <li>• Weighing range 1</li> <li>• Weighing range 2</li> </ul>	150 kg 300 kg
Minimum capacity <ul style="list-style-type: none"> <li>• Weighing range 1</li> <li>• Weighing range 2</li> </ul>	1 kg 2 kg

Verified model	
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

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 g
• 50 kg to 360 kg	± 50 g / ± 0.1 %

## 12.6 Height measurement

### Ultrasonic measuring rod

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

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.

Signals and voice output	
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.

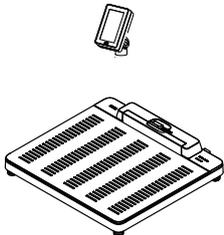
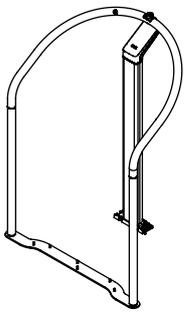
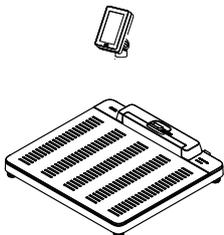
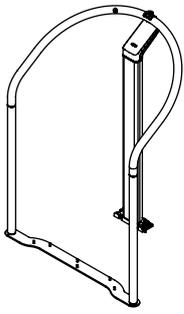
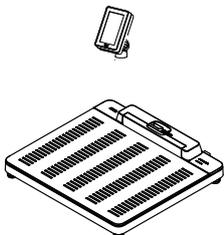
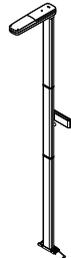
### Digital telescopic measuring rod

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

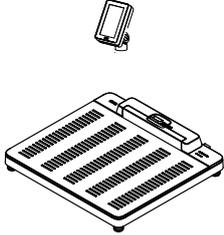
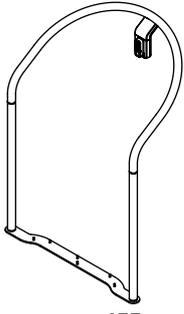
## 13 OPTIONAL ACCESSORIES AND SPARE PARTS

Accessory/spare part	Article number
Switch-mode power supply: 100-240 V~ / 50-60 Hz, 12 V= / 1.5 A / 18 W	68 32 10 272
Barcode scanner	See recommendation at <a href="http://www.seca.com">www.seca.com</a>
<b>seca 463</b> holder for barcode scanner	463 0000 009
<b>seca 459</b> "panda" figure	459 0000 009
<b>seca 487</b> "animals" sticker for ultrasonic measuring rods	487 0045 009
<b>seca 480</b> RS232 adapter box (not available for all models or in all countries, for more information, go to <a href="http://www.seca.com">www.seca.com</a> )	480 6900 009
<b>seca 453</b> battery pack (not available for all models or in all countries, for more information, go to <a href="http://www.seca.com">www.seca.com</a> )	453 0000 009
Handrails	→ <a href="#">Compatible seca products, page 93</a>
Measuring rods	
Configuration software	→ <a href="#">Compatible seca products, page 93</a>
Analysis software	

# 14 COMPATIBLE SECA PRODUCTS

Scale	Handrail	Measuring rod	Configuration software	Analysis software
<b>seca Medical, housing color: White</b>				
 <p><b>seca 655/654</b> 655 7021 099 654 1321 009</p>	 <p><b>seca 455</b> 455 0001 009</p>	-	 <p><b>seca connect 103</b> from Version 2.0</p>	 <p><b>seca analytics 125</b></p>
 <p><b>seca 654</b> 654 1321 009</p>	 <p><b>seca 455</b> 455 0001 009</p>	 <p><b>seca 254</b> 254 1817 009</p>	 <p><b>seca connect 103</b> from Version 2.0</p>	 <p><b>seca analytics 125</b></p>
 <p><b>seca 655/654</b> 655 7021 099 654 1321 009</p>	-	 <p><b>seca 257, standard</b> 257 1714 009 <b>seca 257, short</b> 257 2914 009</p>	 <p><b>seca connect 103</b> from Version 2.0</p>	 <p><b>seca analytics 125</b></p>

EN-US\_excerpt from 17-10-07-654-100c\_2025-03S

Scale	Handrail	Measuring rod	Configuration software	Analysis software
<b>seca Medical, housing color: White</b>				
 <p><b>seca 655/654</b> 655 7021 099 654 1321 009</p>	 <p><b>seca 455</b> 455 0002 009</p>	 <p><b>seca 257</b>, standard 257 1714 009 <b>seca 257</b>, short 257 2914 009</p>	 <p><b>seca connect 103</b> from Version 2.0</p>	 <p><b>seca analytics 125</b></p>

## 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 at [service@seca.com](mailto:service@seca.com).

### 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.

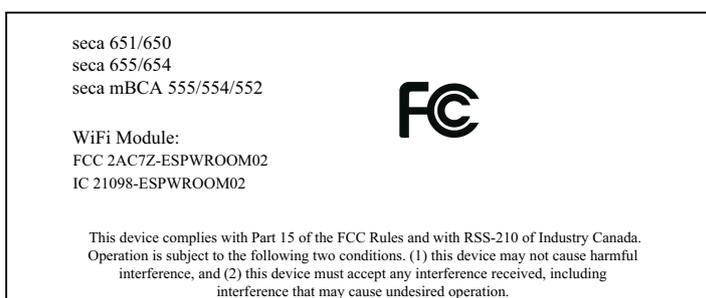
## 17 DECLARATIONS OF CONFORMITY

### 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](http://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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