

seca 222

Measuring rod

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1. DEVICE DESCRIPTION

1.1 Intended use

The medical measuring rod **seca 222** is used primarily in hospitals, general practice and nursing facilities on wards.

The measuring rod is for conventional determination of height and for the early detection of growth disorders; it assists the physician supervising treatment in making a diagnosis or deciding on a course of treatment.

To make an accurate diagnosis, however, other specific examinations have to be ordered by the physician and their results taken into account, in addition to determining height values.

1.2 Functional description

The measuring rod is to stand on the floor and is fitted to a wall with two screws. It is possible to compensate for protruding walls or attachments (such as skirting boards or cable ducts) with a maximum of 5 spacer washers per screw.

The measuring rod consists of two telescopic elements:

- Lower telescopic element: Measuring range 1: 6 cm - 130.5 cm (3 inch - 51.4 inch)
- Upper telescopic element: Measuring range 2: 130.5 cm - 230 cm (51.4 inch - 90 inch)

The head slide of the measuring rod is locked at the top of the upper telescopic element to measure persons taller than 130.5 cm (51.4 inch). The head slide needs to be released to measure persons smaller than 130.5 cm (51.4 inch). The measuring flap can be folded down.

The heel stop helps the patient to assume the correct position for measurement. The heel stop is attached to the measuring rod and supported against the wall.

1.3 User qualification

- Assembly** Devices that are shipped partially assembled may only be mounted by sufficiently qualified persons such as specialist dealers, hospital technicians or seca service technicians.
- Operation** The device may only be operated by healthcare professionals.

2. SAFETY INFORMATION

2.1 Safety information in this user manual

The signal words used in this user manual have the following meaning:



CAUTION!

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

ATTENTION!

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

2.2 Basic safety precautions

- Please observe the information in this user manual.
- Keep this user manual in a safe place. This user manual is part of the product and must be readily available.



CAUTION!

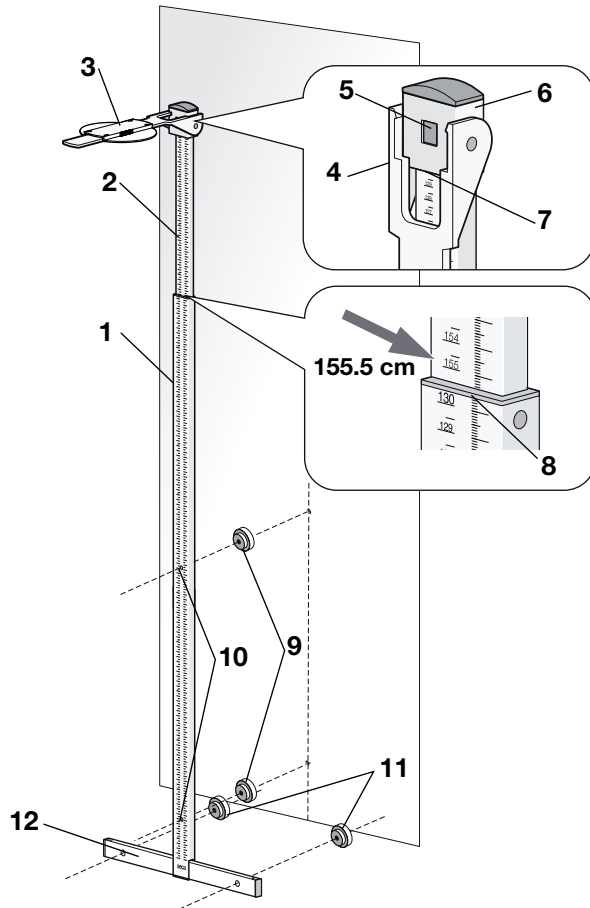
Patient hazard, damage to device

- Use the supplied assembly material only.
- Fold down the measuring slide after each measurement.
- Have the device serviced regularly as described in the respective section of this document.

- Technical changes to the device are not permitted. The unit contains no user-serviceable parts. Make sure that maintenance and repair are only carried out by an authorised seca service partner. You can find your local service partner at www.seca.com or send an email to service@seca.com.
- Make sure you only use genuine seca accessories and spare parts. Otherwise the warranty provided by seca will become null and void.

3. OVERVIEW



3.1 Controls and mounting elements









No.	Element	Function
1	Lower telescopic element	Measuring range 1: 6 cm - 130.5 cm 3 inch - 51.4 inch
2	Upper telescopic element	Measuring range 2: 130.5 cm - 230 cm 51.4 inch - 90 inch
3	Measuring flap extension	Helps the patient to assume the correct position for measurement
4	Measuring flap	<ul style="list-style-type: none"> To be positioned on top of the patient's head Can be folded down

No.	Element	Function
5	Lock	<ul style="list-style-type: none"> Locks head slide at top of upper telescopic element for measurement in measuring range 2 Releases head slide for measurement on lower telescopic element (measuring range 1)
6	Head slide	<ul style="list-style-type: none"> Locked at top of upper telescopic element To be released for measurement on lower telescopic element (measuring range 1)
7	Read-off line 1 (red)	Reference when head slide is positioned on lower telescopic element to measure persons smaller than 130.5 cm (51.4 inch)
8	Read-off line 2 (red)	<ul style="list-style-type: none"> Reference when measuring persons taller than 130.5 cm (51.4 inch) Results to be read off at upper telescopic element (here: 155.5 cm)
9	Spacer washer	<ul style="list-style-type: none"> A maximum of 5 per screw to allow the measuring rod to be attached to a wall precisely vertically Protruding walls or attachments (e.g. skirting boards or cable ducts) can be compensated
10	Fixing hole	The fixing screw of the measuring rod is inserted in this hole
11	Spacer washer	A maximum of 5 per screw to support the heel stop against the wall
12	Heel stop	Helps the patient to assume the correct position for measurement

3.2 Marking on the device and on the rating plate

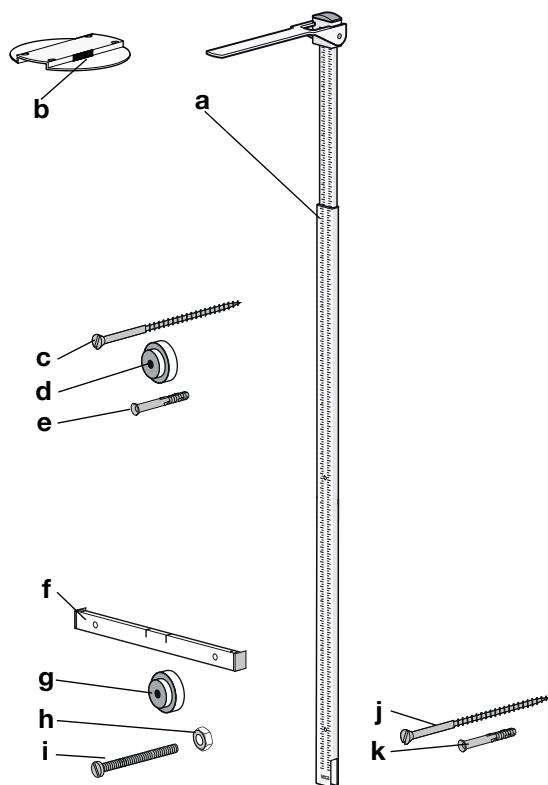
Text/Symbol	Meaning
Model	Model number
xx/xx	Batch number, engraved on back of device
	Observe user manual
	Device complies with EC standards and directives <ul style="list-style-type: none"> 0123: Notified body medical products: TÜV SÜD Product Service

3.3 Marking on the packaging

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

4. BEFORE YOU REALLY GET STARTED...

4.1 Scope of delivery



No.	Component	Pcs.
a	Measuring rod seca 222	1
b	Measuring flap extension	1
c	Screw M4 x 60 mm	2
d	Spacer washer	10
e	Wall plug \varnothing 5 mm	2
f	Heel stop	1
g	Spacer washer	10
h	Plastic nut M5	2
i	Plastic screw M5x40	2
j	Screw M4 x 60 mm	2
k	Wall plug \varnothing 5 mm	2
	User manual, not shown	1

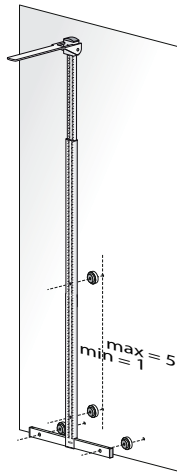
4.2 Mounting measuring rod

Mounting options The measuring rod must be standing on the floor and attached precisely vertically to a wall for meaningful measuring results to be obtained.

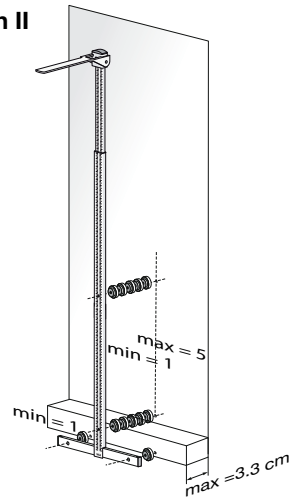
The spacer washers supplied allow you to compensate for protruding walls and attachments (e.g. skirting boards or cable ducts).

The following illustration shows a variety of options for attaching the rod with the number of spacer washers per screw recommended in each case.

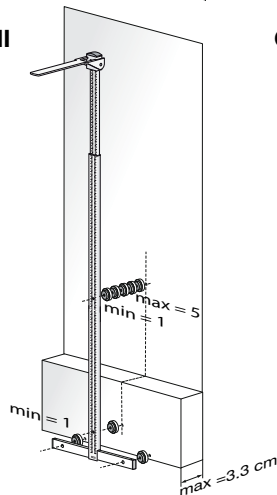
Option I



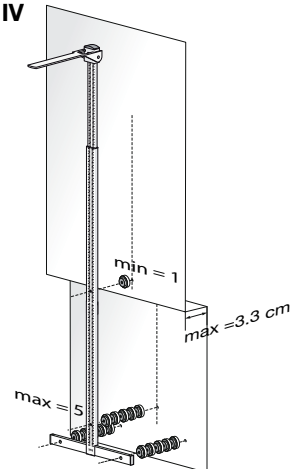
Option II



Option III



Option IV

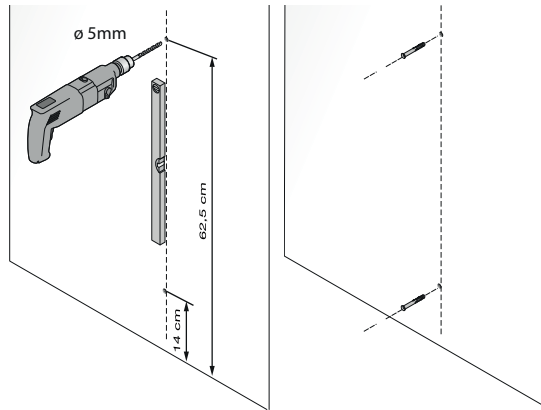


Preparation

Choose an adequately strong, load-bearing wall to mount the device. Standard wall plugs are supplied for installation on solid brick walls. We recommend use of appropriate special wall plugs for other types of walls.

To achieve exact measurement results, the floor where the device is installed must be flat and stable. Soft floorings, e. g. wooden planks, give under the weight of the patient and distort the measured result.

To mount the measuring rod to a wall, proceed as follows:



1. Mark the drill holes perpendicular to each other exactly at the positions indicated in the illustration above.
2. Drill the hole using a drill bit \varnothing 5 mm.
3. Insert the wall plugs in the drill holes.

Mounting measuring rod to the wall

You need the following fastenings:



2 x Screw M4 x 60



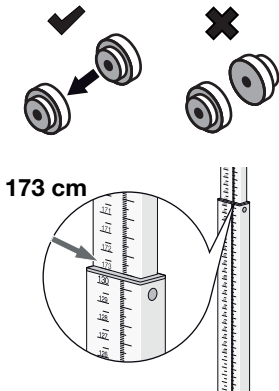
max 10 x Spacer washer

1. If there are protrusions or attachments (e.g. skirting boards or cable ducts) where you are attaching the rod, measure the depth of these.
2. Select the option to suit the attachment location (see “Mounting options” on page 11).

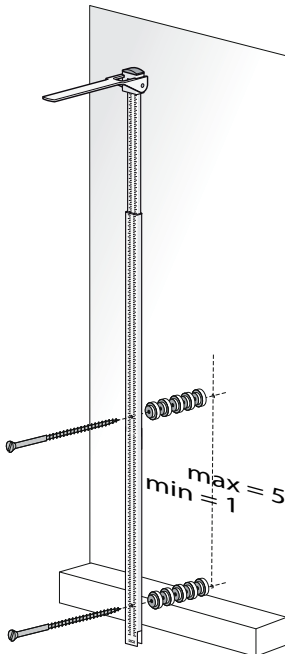
ATTENTION!**Malfunction due to installation errors**

If no spacer washers are used, the head slide will be trapped against the wall. This will make it impossible to measure height.

- Ensure that at least 1 spacer washer per screw is used.



173 cm



- Put the appropriate number of spacer washers ready:
 - 1 spacer washer = 1.2 cm
 - Every subsequent spacer washer: + 0.7 cm
 - 5 spacer washers = 4.0 cm
- Pull the upper telescopic element out to the 173 cm mark.
The holes in the lower telescopic element are exposed.
- Put a screw in the top bore of the measuring rod.
- Put the appropriate number of spacer washers on the screw (the illustration shows attachment option II).
- Screw measuring rod to wall hand-tight.
- Repeat steps 5. to 7. for the bottom bore.
- Tighten up both screws fully.

4.3 Verifying position of measuring rod

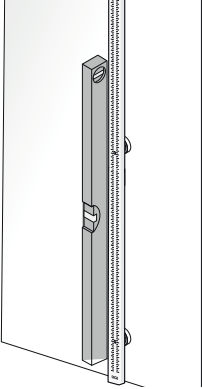
Checking position

After mounting the measuring rod, you must check its position and correct if necessary. To do so, proceed as follows:

1. Use a spirit level to ensure that the measuring rod is vertical.

Requirement: The measuring rod is inclined neither towards nor away from the wall.

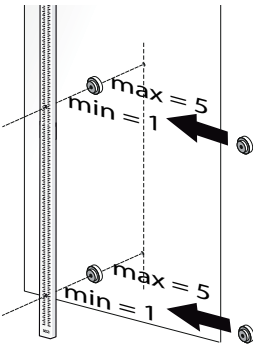
2. If the measuring rod is not vertical, correct its position as described in the section below.



Adjusting position

To correct the position of the measuring rod proceed as follows:

1. Loosen the screws of the measuring rod.
2. Correct the position of the measuring rod by adding or removing spacer washers.
3. Tighten the screws on the measuring rod.
4. Check the position of the measuring rod again.
5. If necessary, re-adjust the position of the measuring rod.



NOTE:

Your seca service partner will also be happy to help. You can find your local seca service partner at www.seca.com or just send an e-mail to service@seca.com.

4.4 Using the heel stop

The heel stop supplied helps the patient to assume the correct position for measurement. The heel stop is attached to the measuring rod and supported against the wall. Proceed as outlined below to fit the heel stop.

Preparing the heel stop

You need the following mounting elements:



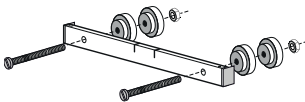
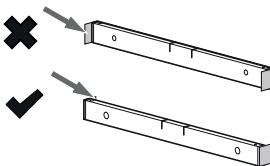
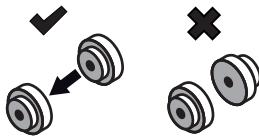
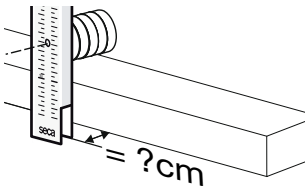
2 x Plastic screw
M5 x 40



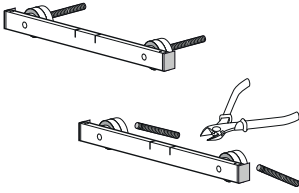
2 x Plastic nut
M5



max 10 x
Spacer washer

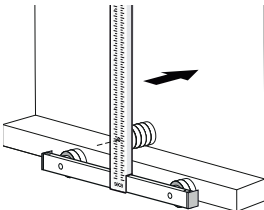
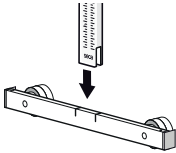
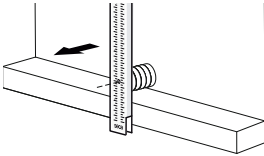


- At the foot of the measuring rod, measure the distance from the wall, the skirting board, the cable duct etc.
- Put the appropriate number of spacer washers ready (max 5 per screw):
 - 1 spacer washer = 1.2 cm
 - Every subsequent spacer washer: + 0.7 cm
 - 5 spacer washers = 4.0 cm
- Align the heel stop as shown in the adjacent illustration.
- Put one plastic screw M5 x 40 in each of the bores in the heel stop.
- Put the appropriate number of spacer washers (in this case: 2) on the screws.
- Screw the spacer washers tightly to the heel stop using a plastic nut.



7. Shorten the plastic screws so that they finish flush with the spacer washer.

Fitting the heel stop



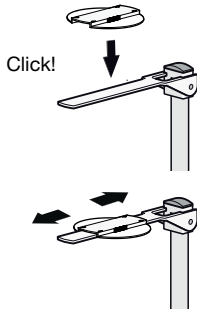
1. Undo the screws of the measuring rod.
2. Put the measuring rod in the grooves of the heel stop.
3. Screw the measuring rod firmly to the wall again.
4. Check the position of the measuring rod as described in Section “Verifying position of measuring rod” from page 14.

NOTE

You can use the metal screws and standard wall plugs supplied as an alternative mounting option for the heel stop. This allows you to screw the heel stop to the wall in the same way as the measuring rod itself.

4.5 Fitting the measuring flap extension

You have the option of increasing the contact surface of the measuring flap by using the measuring flap extension. This enables you to position the patient even better and achieve a more accurate measuring result.



- ◆ Push the measuring flap extension onto the measuring flap until you hear it engage.
- ◆ If required, move the measuring flap extension along the measuring flap in a longitudinal direction.

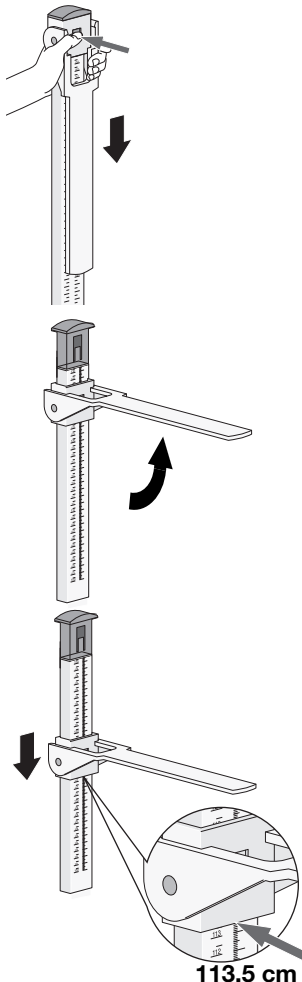
5. PERFORMING LENGTH MEASUREMENT



CAUTION! **Patient hazard**

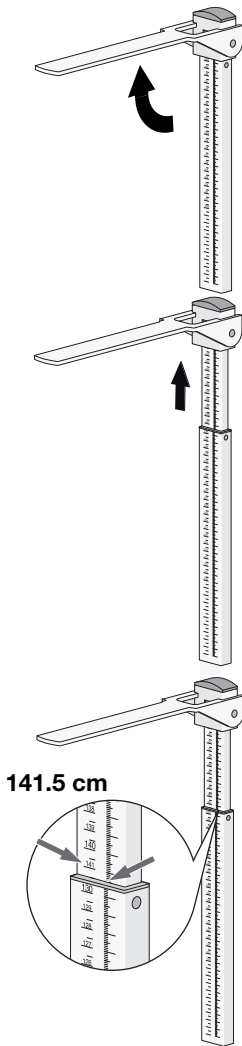
Allways perform a function check as described in section "Function Check" on page 21 before using the device.

5.1 Measuring patients smaller than 130.5 cm



1. Unlock the head slide by pressing on the lock.
2. Unfold the measuring flap so it engages in a horizontal position.
3. Ask the patient to step under the measuring flap:
 - Back to the measuring rod
 - Body kept straight
 - Heels against the heel stop
 - Head straight: So-called "Frankfurt plane" parallel to the measuring flap
4. Move the head slide on the lower telescopic element until the measuring flap rests on the patient's head.
5. Read off the measured result at the read-off line (read-off line 1) of the headslide (here: 113.5 cm).
6. Ask the patient to step away from the measuring rod.
7. Fold the measuring flap down.
8. Move up the head slide until it engages in the lock.

5.2 Measuring patients taller than 130.5 cm



1. Unfold the measuring flap so it engages in a horizontal position.
2. Pull the upper telescopic element out until the patient can comfortably stand under the measuring flap.
3. Ask the patient to step under the measuring flap:
 - Back to the measuring rod
 - Body kept straight
 - Heels against the heel stop
 - Head straight: So-called "Frankfurt plane" parallel to the measuring flap
4. Slide down the upper telescopic element until the measuring flap rests on the patient's head.
5. Read off the measured result at the read-off line (read-off line 2) of the lower telescopic element (here: 141.5 cm).
6. Ask the patient to step away from the measuring rod.
7. Slide the upper telescopic element to the lowest position.
8. Fold the measuring flap down.

6. HYGIENE TREATMENT

ATTENTION!

Damage to device

Inappropriate detergents may damage the sensitive surfaces of the devices.

- Do not use caustic or abrasive detergents.
- Do not use spirits or benzine.

6.1 Cleaning

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

6.2 Disinfecting

1. Follow the instructions on the disinfectant.
2. Disinfect the device at regular intervals with a commercially available disinfectant, e.g. with 70% isopropyl alcohol.

Please take note of the following terms:

- Prior to every measurement with direct skin contact:
 - Weighing platform
 - Head slide and measuring flap
 - Measuring flap extension (if applicable)
- After every measurement with direct skin contact:
 - Weighing platform
 - Head slide and measuring flap
 - Measuring flap extension (if applicable)
- If required:
 - Column and display of the scales
 - Telescopic elements of the length measuring rod
 - Heel stop (if applicable)

6.3 Sterilizing

This device may not be sterilised.

7. FUNCTION CHECK

- ◆ Perform functional check prior to each operation.

A complete functional check includes:

- Visual inspection for mechanical damage
- Visual and functional inspection of all movable parts
- Functional check of the control elements



CAUTION!

Risk of injury

If you notice any faults or deviations during the functional check, do not use the unit.

- Have repairs of the unit carried out by seca service or an authorized service partner.

8. TROUBLESHOOTING

Problem	Cause/Solution
<p>Measurement does not return plausible results.</p>	<p>Measurement result read off incorrectly</p> <ul style="list-style-type: none"> - Use the correct edge for the measuring range currently in use ("Performing length measurement" from page 18) - Read off the decimal places for the current measuring range in the correct direction ("Performing length measurement" from page 18) <p>Incorrect position/posture of patient</p> <ul style="list-style-type: none"> - Correct the position/posture of the patient ("Performing length measurement" from page 18) <p>Measuring rod mounted incorrectly</p> <ul style="list-style-type: none"> - Mount the measuring rod correctly ("Before you really get started..." from page 10)

9. SERVICING

The seca measuring rod does not require maintenance. Should any part of it fail to function, please contact an authorised service partner.

You can find your local service partner at www.seca.com or just send an e-mail to service@seca.com.

10. TECHNICAL DATA

10.1 General technical data

General technical data	
Dimensions <ul style="list-style-type: none"> • Depth (including measuring flap extension) 37,5 mm 120 mm • Width (including measuring flap extension) • Height (retracted) 1322 mm • Height (extended) 2018 mm 	
Weight	approx. ca. 1.3 kg
Temperatur range <ul style="list-style-type: none"> • Operation +10 °C to +40 °C (50 °F to 104 °F) • Storage -10 °C to +65 °C (14 °F to 149 °F) • Transport -10 °C to +65 °C (14 °F to 149 °F) 	
Air pressure <ul style="list-style-type: none"> • Operation 700 - 1060 hPa • Storage 700 - 1060 hPa • Transport 700 - 1060 hPa 	
Humidity <ul style="list-style-type: none"> • Operation 30% - 80% no condensation • Storage 0% - 95% no condensation • Transport 0% - 95% no condensation 	
Medical device in accordance with Directive 93/42/EEC	Class I with measuring function

10.2 Technical data, length measuring

Technical data, length measuring	
Measuring range 1	6 cm - 130.5 cm 3 inch - 51.4 inch
Measuring range 2	130.5 cm - 230 cm 51.4 inch - 90 inch
Graduation	1 mm, 1/8 inch
Accuracy	better than ± 5 mm

11. WARRANTY

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

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

We ask customers based abroad to contact their local sales agent directly in the case of warranty claims.



Konformitätserklärung
Declaration of conformity
Certificat de conformité
Dichiarazione di conformità
Declaración de conformidad
Overensstemmelsesattest
Försäkran om överensstämmelse
Konformitetserklæring
vaatimuksenmukaisuusvakuutus
Verklaring van overeenkomst
Declaração de conformidade
Δήλωση Συμβατότητας
Prohlášení o shodě
Vastavusdeklaratsioon
Megfelelőségi nyilatkozat
Atitikties patvirtinimas
Atbilstības apliecinājums
Oświadczenie o zgodności
Izjava o skladnosti
Vyhlásenie o zhode
Onay belgesi

Das Längenmessgerät
The equipment for measuring length
Appareil de mesure à fonctionnement
Strumento per la misura della statura
Equipo para medición longitudinal
Højdemåleren
Längdmätinstrumentet
Lengdemåleren
Pituuden mittauslaite
De lengtemeter
O aparelho de medição da altura
Η συσκευή μέτρησης
Přístroj k měření délky
Pikkusemõõtesead
A távolságmérő
Ilgio matuoklis
Iekārta garuma mērīšanai
Urządzenie do pomiaru długości
Naprava za merjenje dolžine
Dĺžkové meradlo
Boy ölçüm cihazı

seca 222

Chargennr.: siehe Rückseite Messstab
Batch no.: see back of measuring rod
N° de lot : voir au dos de la toise de mesure
N° di lotto: v. parte posteriore dell'asta graduata
N° de lote: véase lado trasero de la varilla
Charge nr.: se på bagsiden af længdemåleapparat
Partinr.: se måtstavens baksida
Lot nr.: se baksida målestav.
Valmistuserän numero: ks. mittasauvan takaosaa
Chargennummer: zie achterzijde meetlat
N° de carga: vide retaguarda da vareta de medição
Αρ. σειράς: Βλέπε στην πίσω πλευρά του μετρητή
Číslo šarže: viz zadní strana - měřidlo
Partiinumber: vt mõõtelati tagaküljelt
Gyártási tételszám: lásd a távolságmérő hátlapját
Partijos Nr.: žr. skirtuką galinėje pusėje
Sērijas Nr.: skat. mērīlatas aizmugurē
Nr partii: patrz na odwrocie listwy pomiarowej
Štev. šarže: oglejte si zadnjo stran merilne palice
Číslo šarže: pozri zadnú stranu meracej laty
Şarj numarasi: ölçüm çubuğunun arka kısmına bakın

- D** ... erfüllt die geltenden Anforderungen folgender Richtlinien:
93/42/EWG über Medizinprodukte.
- GB** ... complies with the applicable requirements of the following directives:
93/42/EEC governing medical devices.
- F** ...satisfait aux directives et normes suivantes:
93/42/CEE relatives aux dispositifs médicaux.
- I** ...è conforme ai requisiti delle seguenti direttive: 93/42/CEE in materia di prodotti medicali.
- E** ... cumple las exigencias vigentes de las siguientes directivas:
93/42/CEE sobre productos sanitarios.
- DK** ... opfylder de gældende krav fra følgende direktiver:
93/42/EEG om medicintekniske produkter.
- S** ... uppfyller gällande krav i följande direktiv och normer:
93/42/EEG om medicintekniska produkter.
- N** ... oppfyller gjeldende krav i følgende direktiver:
93/42/EØF om medisinske produkter.
- FIN** ... täyttää seuraavien direktiivien voimassa olevat määräykset:
93/42/ETY, lääkinnälliset laitteet
- NL** ... voldoet aan de geldende eisen van de volgende richtlijnen:
93/42/EEG betreffende medische hulpmiddelen.
- P** ... cumpre os requisitos válidos das seguintes directivas:
93/42/CEE relativa a dispositivos médicos.
- GR** ... πληρεί όλες τις ισχύουσες απαιτήσεις των ακόλουθων Οδηγιών:
93/42/EOK περί ιατροτεχνολογικών προϊόντων.
... splňuje platné požadavky těchto směrnic:
93/42/EHS o zdravotnických prostředcích.
- CZ** ...vastab järgmiste direktiividega kehtestatud nõudeid:
93/42/EMÜ meditsiinivahetite kohta.
- EST** ... teljesíti a következő irányelvek érvényben lévő követelményeit:
93/42/EGK irányelv az orvostechikai termékéről.
- HU** ... išpildo galiojančius tokių direktivų reikalavimus:
93/42/EEB ir medicinos prietaisų
- LT** ... atbilst šādu direktīvu spēkā esošajām prasībām:
93/42/EEK par medicīnas ierīcēm.
- LV** ... spełnia obowiązujące wymagania następujących dyrektyw:
93/42/EWG o wyrobach medycznych.
- PL** ... izpolnjuje veljavne zahteve naslednjih direktiv: 93/42/EGS o medicinskih pripomočkih.
- SLO** ... spĺňa platné požiadavky nasledovných smerníc:
93/42/EHS o medicínskych výrobkoch.
- SK** ... aṣağidaki yönergelerin geçerli talimatlarını yerini getirir:
tıbbi ürünler hakkında 93/42/AET yönetmeliği.
- TR**



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