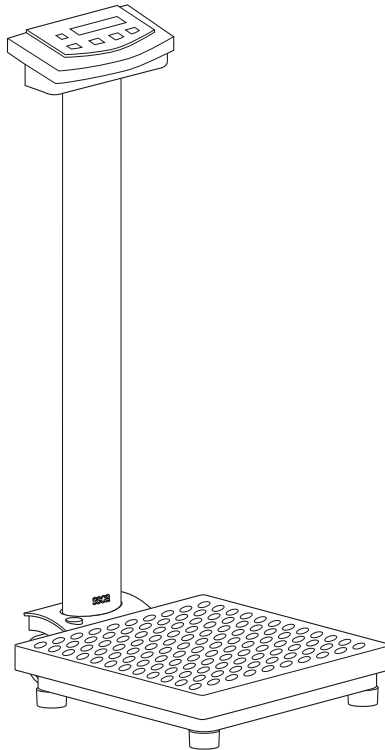


# seca 778



*Instruction manual and guarantee*



# Full certification

---

In seca products you are purchasing not only technology matured over a century, but also quality confirmed by authorities, the legal system and by institutes. seca products comply with European directives, standards and national laws. With seca, you are buying the future.



**M**

The products in these operating instructions comply with German legislation governing medical products and therefore with Directive 93/42/EEC of the Council of the European Community which is embodied in national laws throughout Europe.

Scales carrying this symbol are approved for medical purposes in the European Community. seca scales with this symbol meet the stringent quality and technical requirements placed on scales which can be calibrated.



Scales carrying this symbol are calibrated in accordance with Precision Class III of EC Directive 90/384/EEC.



Products carrying this symbol comply with the following directives and standards:

1. Directive 90/384/EEC governing non-automatic weighing instruments
2. Directive 93/42/EEC governing medical devices
3. DIN EN 45501 governing metrological aspects of non-automatic scales



seca's professionalism has also been officially recognized. The certificate from TÜV Product Service, the body responsible for medical devices, confirms that as a manufacturer of medical devices, seca rigorously complies with stringent legal requirements. seca's quality assurance system covers the development, production, sales and service of medical scales and measuring systems and ergometry.



seca helps the environment.

We are concerned to save natural resources. We therefore strive to save packaging material where meaningful. What is left over can conveniently be disposed of locally via the German Dual System (recycling programme).

# 1. Congratulations!

---

By purchasing the **seca 778** electronic personal scale, you have acquired a highly-accurate and sturdy piece of equipment.

seca has been putting its experience at the service of health for over 150 years now, and as market leader in many countries of the world, is always setting new standards with its innovative developments for weighing and measuring.

In accordance with national regulations, the **seca 778** electronic personal scale is used primarily in hospitals, doctors' surgeries and in-patient nursing facilities.

The scales are a Class I medical product, and have been calibrated in accordance with the precision class III.

Weight is determined within a few seconds.

In addition to the conventional determination of weight, the **seca 778** also has a function for determining body mass index. For this purpose, height is entered on the keypad and the body mass index associated with the weight value is output.

The scale is of a very sturdy construction and will give you long and loyal service.

## 2. Safety

---

Before using the new scale, please take a little time to read the following safety instructions.

- Follow the safety instructions in the instruction manual.
- Keep the operating manual and the declaration of conformity contained therein in a safe place.
- Do not drop the scale or subject it to violent shocks.
- Have scale serviced and re-calibrated on a regular basis (see "Servicing" on page 13).
- Have repairs carried out exclusively by authorised persons.
- Use only the type of battery stated (see "Changing the batteries" on page 13).
- When using the scale with a mains unit, ensure that the supply cable is routed in such a way as to exclude any type of tripping hazard.

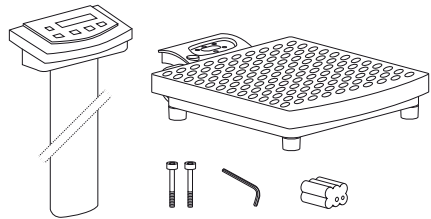
# 3. Before you start...

---

## Unpacking

The scope of supply includes:

- Weighing platform
- Column with display head
- 2 M6 x 45 screws
- 1 WAF 5 Allen key
- Battery holder containing 6 mignon-type AA 1.5 V batteries
- 1 set of operating instructions



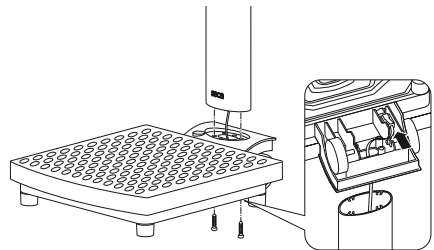
## Fitting the column

The column with the LCD display can be fitted in two positions, allowing you to determine in which direction the display is legible - facing either towards or away from the platform.

- Guide the connecting cable through the opening.
- Place the column in the recess, facing it in the desired direction.
- Screw the column to the weighing platform from underneath.

If necessary, lay the scale carefully on its side to tighten up the screws.

- Connect the plug of the connecting cable to the rear of the scale.
- Then place the scale upright again.

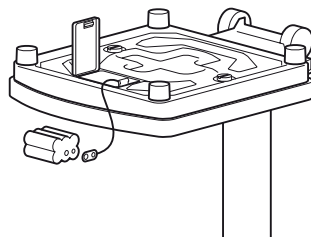


## Power supply

The scale is powered exclusively by batteries.

The LC display has a low power consumption – 16,000 weighing operations can be performed with one set of batteries.

- Carefully turn over the scale so that the base of the scale is accessible.
- Push the battery compartment closure towards "Battery" and open the cover.
- Connect the cable to the holder and batteries.
- Place the holder in the battery compartment.
- Close the cover and then turn the scale back up the right way.



**Note: the scale is prepared for use with a seca mains unit which is available as an accessory.**

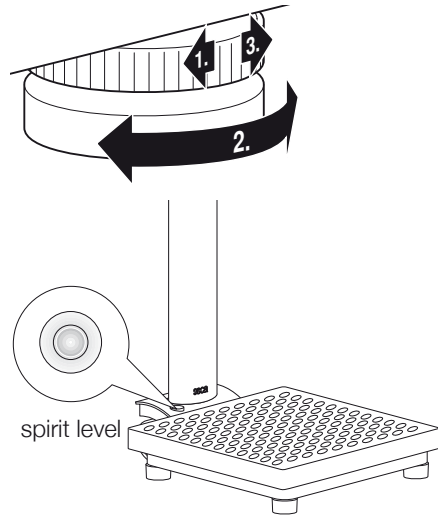
## 4. Setting up and aligning the scale

---

- Place the scale on a level surface.
- Undo the locknuts using the four foot screws (1).
- Align the scale by undoing the foot screws. The air bubble in the spirit level must be right in the centre of the circle (2).
- Then re-tighten the locknuts (3).
- Ensure that only the feet of the scale are in contact with the floor. The scale may not be in contact at any other point.

### **Important!**

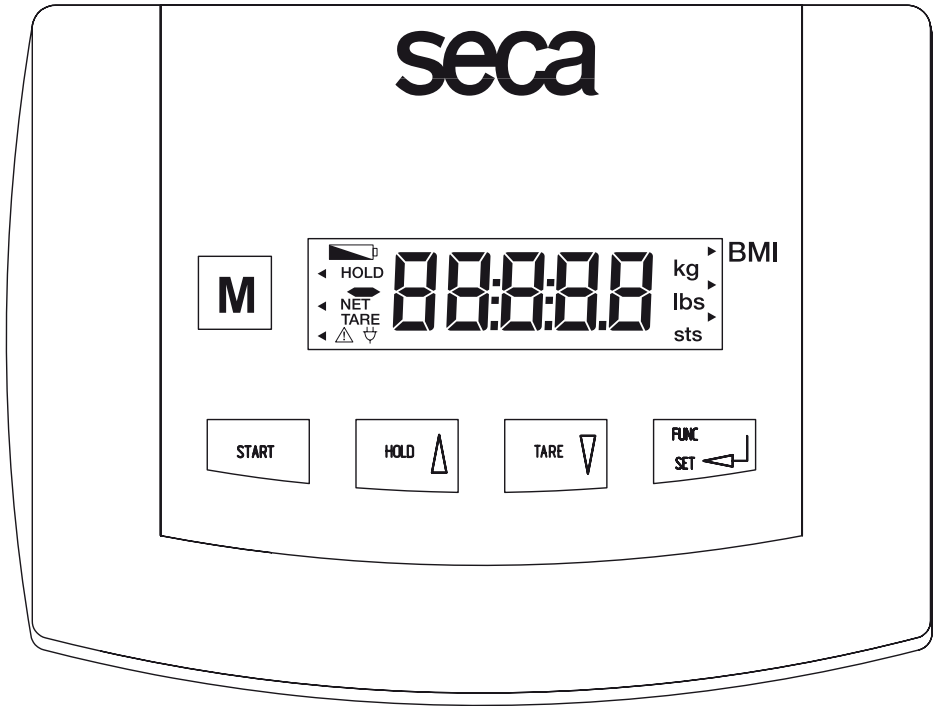
**The alignment of the base of the scale must be checked and corrected if necessary every time the location of the scale is changed.**



# 5. Operation


## Controls and displays

The controls and display are in the display part.



**START** Switch scale on and off

**HOLD**  press briefly → activate hold function  
in function menu → increase value

**TARE**  press briefly → set display to zero, activate/deactivate tare function  
in function menu → decrease value

**FUNC SET**  Activating the BMI function, Confirmation

## Checking that the contents of the calibration counter are correct

This seca scale is calibrated. Calibration may be performed only by authorised centres. To ensure this, the scale is fitted with a calibration counter which records any change to data relevant to calibration. If you want to check whether the scale is properly calibrated, proceed as follows:

- If necessary, switch off the scale.
- Keep any key depressed and start the scale.

The current contents of the calibration counter are shown on the display for a few seconds.

- Compare the output contents of the calibration counter with the number shown on the calibration counter sticker.

For valid calibration, both numbers must match. If sticker and calibration counter do not match, then re-calibration is required. Contact your service agent or seca Customer Service.

If a supplementary calibration is necessary, then the supplementary calibration mark illustrated opposite is used to record the calibration counter position instead of the seca calibration mark shown above. This mark is secured with an additional seal by the person authorised to perform the supplementary calibration. The supplementary calibration mark is available from seca Customer Service under the number 14-05-01-886.



**Both numbers must match.**



## Correct weighing

- Press the Start key with no load on the scale.

**SECA**, **888888** and **00** appear consecutively in the display. The scale is then automatically set to zero and ready to use.

- Stand on the scale and keep still.
- Read the weighing result off the digital display.
- If a load greater than 200 kg is placed on the scale, **StOP** appears in the display.
- To switch off the scale, press the Start key again.



## Automatic switch-off/economy mode

The scale automatically detects whether it is being operated on batteries alone or whether it is connected to the mains.

- With battery operation: automatic shut-down after 30 seconds.
- With mains operation: shut-down only via keypad.

## Taring weight display (TARE)

The tare function is very useful, for example for determining the weight of a child, animal or other object placed on the scale in addition to yourself.

Proceed as follows:

- Press the Start key with no load on the scale.



- First stand on the scales yourself without the additional weight and activate the Tare function by pressing the **TARE** key.



The display is reset to zero. **0.0** appears in the display. The note "NET" appears.

- Now take the additional load onto the scale. You can leave the scale to do so, in which case **-----** appears.



The scale determines the weight of the additional load. You can now perform as many weighing operations as you like.

- Press the key again to deactivate the Tare function; the scale is then back in normal weighing mode and the tare value has been erased.
- The tare value is likewise erased by the scale being switched off.



## Store weight value (HOLD)

You can also continue displaying the weight determined once the load has been removed. This makes it possible to look after a patient first, before having to note the weight:

- Press the **HOLD** key whilst the load is on the scale.



“HOLD” appears in the digital display. The display starts to flash, showing that the scale is checking the stability of the weight values. Only once stability prevails is the displayed value stored. The value is stored until the scale switches off automatically.



The triangle with the exclamation mark indicates that this frozen display is an additional facility which is not subject to calibration.

- The HOLD function can be switched off by pressing the **HOLD** key again.



**0.0** appears in the display if the scale has no load on it, otherwise the current weight. The “HOLD” display vanishes.

### Note:

**The HOLD and TARE functions can also be used simultaneously.**

## Body Mass Index (BMI)

Body Mass Index puts height and weight in relationship to one another, providing more accurate information than ideal Broca weight, for example. A tolerance range is given which is considered ideal for health.

- Press the Start key with no load on the scale.



**SECA**, **88888** and **0.0** appear consecutively in the display. The scale is then automatically set to zero and ready for operation.

- Press the **FUNC** key.  
On the display, you will see the last height entered.



- You can use the arrow keys to adjust the value in increments according to the graduations displayed.

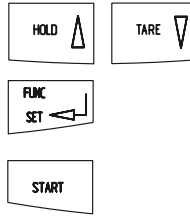


- Once the correct value is set, press the **FUNC** key again. The BMI function is now activated.



- Step on the scale and keep still.
- Read off the BMI on the digital display and compare it with the categories on page 11.

- Press an arrow key if you would like to see the weight briefly.
- To return to normal weighing mode, press the **FUNC** key.
- To switch off the scale, press the Start key again.



## Evaluating Body Mass Index for adults:

Compare the value determined with the categories quoted below which correspond to those used by WHO, 2000.

- **BMI below 18.5:**  
Warning, this patient weighs too little. There could be a tendency to anorexia. An increase in weight is recommended to improve well-being and performance. If in doubt, consult a specialist.
- **BMI between 18.5 and 24.9:**  
The patient is of a normal weight. He can stay as he is.
- **BMI between 25 and 30 (pre-obese):**  
The patient is slightly to moderately overweight. He should cut his weight if he is already ill (e.g. diabetes, hypertension, gout, fat metabolism disorders).
- **BMI over 30:**  
Weight reduction is essential. Metabolism, cardiovascular system and bones are all under strain. A consistent diet, plenty of movement and behavioural training are all recommended. If in doubt, consult a specialist.

## 6. Cleaning

---

Clean the rubber surface and the housing as required using a domestic cleaning agent or commercially-available disinfectant. Follow the manufacturer's instructions.

Under no circumstances use abrasive or acid cleaners, white spirit, benzene or the like for cleaning. Such substances can damage the high-quality surfaces.

## 7. What do I do if...

---

### ... no weight display comes on?

- Is the scale switched on?
- Check the batteries.
- Is the plug contact for connecting the display to the scale correctly connected?

### ... 0.0 does not appear before weighing?

- Press the Start key again – there must not be any load on the scale – and only its feet should be in contact with the floor.

### ... one segment is illuminated constantly or not at all?

- The relevant segment has a fault. Inform Servicing.

### ... the display shows ?

- Battery voltage is running low. Change the batteries in the next few days.

### ... bAtE appears in the display?

- Batteries are empty. Put in new batteries.

### ... 5tOP appears in the display?

- Maximum load has been exceeded.

### ... the display flashes?

- If you have just activated the Hold or Tare function, please wait until the scale has detected a steady weight value. The display will then stop flashing.
- If there has been no activation of a function beforehand, remove the load from the scale and wait until 0.0 is displayed, then weigh again.

### ... the display tENP appears?

- The ambient temperature of the scale is too high or too low. Place the scale in an ambient temperature between +10 °C and +40 °C. Wait about 15 minutes for the scale to adapt to the ambient temperature and then weigh again.

### ... the display E and a number appear?

- Switch off the scale with the Start key and start the scale again. The scale will then work normally again.

If this is not the case, disconnect the power supply by briefly removing the batteries. If this measure is equally unsuccessful, inform the Service department.


## 8. Servicing

---

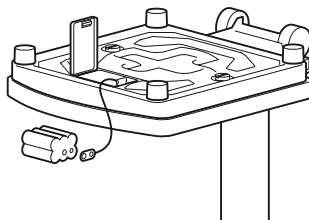
Have the scale recalibrated by authorised persons in accordance with national legal requirements. The year of initial calibration can be found behind the CE symbol on the rating plate above the number of the appointed office, 0109 (Hessen Weights & Measures Office). Recalibration is essential if one or more security marks are damaged or the calibration counter does not match the number on the applicable calibration counter mark (cf. page 8).

We recommend having your scale serviced by your local service agent before having it recalibrated. seca Customer Service will be pleased to give you further assistance.

### Changing the batteries

When  or **bAtt** appear in the display, you should change the batteries. You need 6 type AA 1.5 V batteries.

- Carefully turn over the scale so that the base of the scale is accessible.
- Push the battery compartment closure towards “Battery” and open the cover.
- Take out the holder and batteries.
- Remove the used batteries and insert new batteries in the holder.




### Check that the polarity is correct.

- Place the holder and batteries in the battery compartment.
- Close the cover.
- Then turn the scale back up the right way.

## 9. Technical data

---

|                                     |  |
|-------------------------------------|--|
| <b>Maximum load</b>                 | 200 kg   |
| <b>Graduations</b>                  |  |
| 0 up to 200 kg                      | 0.1 kg   |
| <b>Dimensions scale</b>             |  |
| width:                              | 292 mm / 11.5 ins                                |
| height:                             | 823 <sup>+10</sup> mm / 32.4 <sup>+0.4</sup> ins |
| depth:                              | 410 mm / 16.1 ins                                |
| <b>Dimensions weighing platform</b> |  |
| width:                              | 292 mm / 11.5 ins                                |
| height:                             | 75 <sup>+10</sup> mm / 2.8 <sup>+0.4</sup> ins   |
| depth:                              | 300 mm / 11.8 ins                                |
| <b>Height of figures</b>            | 16 mm  |
| <b>Weight</b>                       | approx. 9 kg                                     |

|   |   |
|---|---|
| <b>Temperature range</b>                          | +10 °C to +40 °C  |
| <b>Power supply</b>                               | Battery/<br>mains unit (option)   |
| <b>Minimum load</b>                               | 2 kg  |
| <b>Batteries</b>                                  | 6 type AA 1.5 V batteries   |
| <b>Calibration as per Directive 90/384/EEC</b>    | approved for medical use, Class III   |
| <b>Medical product as per Directive 93/42/EEC</b> | Class I   |
| <b>EN 60 601-1:</b>                               |   |
| Insulated equipment, Protection Class II:         | <input type="checkbox"/>  |
| medical electrical equipment type B:              |  |
| <b>Accuracy at first calibration</b>              |   |
| 0 to 50 kg:                                       | ± 50 g  |
| 50 kg to 200 kg:                                  | ± 100 g   |
| <b>Functions</b>                                  | Tare, Hold, Body Mass Index   |

## 10. Spare parts and accessories

---

### Measuring rods

Material: hard-anodised aluminium, slide with lockable measuring tab

#### seca 220 telescopic measuring rod

seca model 220-17-14-004:

Measuring range: 820 - 2000 mm,  
Graduations: 1 mm

seca model 220-18-14-004  
(double graduations):

Measuring range: 820 - 2000 mm and  
32 1/4 " - 78 3/4 ",  
Graduations: 1 mm and 1/8 "

### Power supply

#### Model dependent mains unit

Plug-in mains unit, Euro: 230V~ / 50Hz / 12V= / 130mA

seca spare part no.: 68-32-10-252

Desk-top mains unit, switchable, Euro: 115V~ / 230V~ / 50-60Hz / 9V= / 350mA

seca spare part no.: 68-32-10-243

Plug-in mains unit, USA: 120V~ / 60Hz / 12V= / 150mA

seca spare part no.: 68-32-10-259

#### Attention!

Use only seca original plug-in mains units with 9 V or controlled 12 V output voltage. Commercially-available mains units may supply a higher voltage than stated and thus lead to damage to the scale.

### Recalibration

#### Supplementary calibration mark

seca spare part no.: 14-05-01-886

# 11. Disposal

---

## Disposing of the device



Do not dispose of the device in domestic waste. The device must be disposed of properly as electronic waste. Follow the national regulations which apply in your case. For further information, contact our service department at:

**service@seca.com**

## Batteries

Do not throw used batteries away in domestic waste. Dispose of batteries at collection points in the vicinity. When buying new batteries, select those low in harmful substances and containing no mercury (Hg), cadmium (Cd) or lead (Pb).

# 12. Warranty

---

A two-year warranty from date of delivery applies to defects attributable to poor materials or workmanship. All moveable parts - batteries, cables, mains units, rechargeable batteries etc. - are excluded. Defects which come under warranty will be made good for the customer at no charge on production of the receipt. No further claims can be entertained. The costs of transport in both directions will be borne by the customer should the equipment be located anywhere other than the customer's premises. In the event of transport damage, claims under warranty can be

honoured only if the complete original packaging was used for any transport and the merchandise secured and attached in that packaging just as it was when originally packed. All the packaging should therefore be retained.

A claim under warranty will not be honoured if the equipment is opened by persons not expressly authorised by seca to do so.

We would ask our customers abroad to contact their local sales agent in the event of a warranty matter.



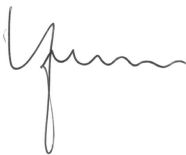
Konformitätserklärung  
declaration of conformity  
Certificat de conformité  
Dichiarazione di conformità  
Declaración de conformidad  
Overensstemmelsesattest  
Försäkran om överensstämmelse  
Konformitetserklæring  
vaatimuksenmukaisuusvakuutus  
Verklaring van overeenkomst  
Declaração de conformidade  
Δήλωση Συμβατότητας

Die nichtselbsttätige Personenwaage  
The non-automatic personal scales  
Le pèse-personnes non automatique  
La bilancia pesapersona non automatica  
La báscula no automática pesapersona  
Den ikke-automatiske personvægt  
Den icke automatisk personvåg  
Den ikke-automatiske personvekten  
Ei-automaattinen henkilövaaka  
De niet-automatische personenweegschaal  
A balança não automática para pessoas  
Η μη αυτόματη ζυγαριά ατόμων

**seca 778**

EG-Bauartzulassung D01-09-020  
EC type approval D01-09-020  
Homologation CE D01-09-020  
Omologazione del tipo costruttivo CEE D01-09-020  
Homologación CE D01-09-020  
EF-typegodkendelse D01-09-020  
EG-kontroll D01-09-020  
EF-konstruksjonstype-godkjennelse D01-09-020  
EY-tyyppihyväksyntä D01-09-020  
EG-modelkeuring D01-09-020  
Homologação CE de tipo de construção D01-09-020  
Άδεια κατασκευαστικού τρόπου E.K. D01-09-020

- D** ... entspricht dem in der Bescheinigung über die Bauartzulassung beschriebenen Baumuster. Die Waage erfüllt die geltenden Anforderungen folgender Richtlinien:  
90/384/EWG über nichtselbsttätige Waagen, 93/42/EWG über Medizinprodukte und die Europäische Norm DIN EN 45501.
- GB** ... corresponds to the type described in the certificate in respect of type approval permit. The scales conform to the applicable requirements of the following directives:  
90/384/EEC on non-automatic scales  
93/42/EEC on medical products and European standard DIN EN 45501
- F** ... conforme au modèle type décrit dans le certificat d'homologation. Cette balance est conforme aux directives et normes suivantes:  
directive 90/384/CEE concernant l'harmonisation des Etats membres relative aux instruments de pesage à fonctionnement non automatique;  
directive 93/42/CEE sur les produits et appareils médicaux;  
norme européenne DIN EN 45501
- I** ... è conforme al campione descritto nel certificato di omologazione costruttiva. La bilancia risponde alle vigenti esigenze poste dalle seguenti direttive:  
90/384/CEE sulle bilancie non automatiche,  
93/42/CEE sui prodotti medicali e la norma europea DIN EN 45501
- E** ... corresponde a la muestra descrita en el certificado sobre el permiso de construcción. La báscula cumple las exigencias de las siguientes directrices:  
90/384/CEE sobre básculas no automáticas  
93/42/CEE sobre productos médicos y la norma europea DIN EN 45501
- DK** ... svarer til det typemønster, som er beskrevet i attesten over typegodkendelsen. Vægten opfylder de gældende krav fra følgende direktiver:  
90/384/EØF om ikke-automatiske vægte, 93/42/EØF om medicinprodukter og den europæiske standard DIN EN 45501
- S** ... motsvarar beskrivningen enligt mönstertillståndet. Vågen uppfyller gällande krav i direktiven angående icke automatiska vågar (90/384/EWG), 93/42/EWG över medicinska produkter samt den europeiska normen DIN EN 45501
- N** ... er i samsvar med mønsteret som er beskrevet i sertifikatet over konstruksjonstype-godkjenningen. Vekten oppfyller de gjeldende kravene i følgende direktiver:  
90/384/EEC om ikke-automatiske vekter, 93/42/EEC om medisinske produkter og den europeiske standarden DIN EN 45501.
- FIN** ... on tyypipihväsytätödistuksessa kuvatun rakennemallin mukainen. Vaaka täyttää seuraavien direktiivien voimassa olevat vaatimukset:  
90/384/ETY ei-automaattisista vaaista, 93/42/ETY lääketieteellisistä tuotteista ja Euro-normi DIN EN 45501.
- NL** ... komt overeen met de in de verklaring van over de modelkeuring beschreven constructie. De weegschaal voldoet aan de geldende eisen van de volgende richtlijnen  
90/384/EEG inzake niet-automatische weegschalen  
93/42/EEG inzake medische hulpmiddelen en de Europese norm DIN EN 45501.
- P** ... corresponde ao padrão de construção descrito no certificado de homologação de tipo de construção. A balança satisfaz os requisitos aplicáveis da directiva sobre balanças não automáticas 90/384/CEE e 93/42/CEE sobre artigos médicos do Conselho, bem como da norma Europeia DIN EN 45501.
- GR** ... ανταποκρίνεται στο κατασκευαστικό πρότυπο που περιγράφεται στην εγκριτική βεβαίωση του κατασκευαστικού τρόπου. Η ζυγαριά εκπληρώνει τις προϋποθέσεις των ακόλουθων Οδηγιών:  
90/384/ ΕΟΚ περί μη αυτόματων ζυγαριών, 93/42/ΕΟΚ περί ιατρικών προϊόντων, και την Ευρωπαϊκή Προδιαγραφή DIN EN 45501.



Sönke Vogel  
Geschäftsführer  
seca gmbh & co. kg.  
Hammer Steindamm 9-25  
22089 Hamburg  
Telefon: +49 40.200 000-0  
Telefax: +49 40.200 000-50