Manual

Densitometer T 120 and RT 120
Light table LP 20 and LP 40
Welcome to the community of TECHKON users. We are happy that you chose to purchase a TECHKON measurement device. This manual will help you get started to use your measuring device.

Do you have suggestions for improvements or do you need information that goes beyond this manual? We would be glad to hear from you. Your suggestions or questions make an important contribution towards the continuous optimization of our manuals.

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About this manual

If some of the terms mentioned are new to you, just look them up in the glossary or refer to the respective chapter. There you will find detailed explanations.

Before starting to work with your new measurement device, you should carefully read this manual.

It’s always a good idea to register. This is the only way we can inform you of updates.

The registration card is the last page of the manual and can be removed at the perforation.

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Product description

The black-and-white Densitometer T 120 can measure densities and dot percentages on films quickly and precisely. The black-and-white Densitometer RT 120 additionally features a reflective function for measurement on polyester plates and black-and-white prints.

Transmission measurements require a light table with constant and bright luminosity. The TECHKON light tables LP 20 and LP 40 allow density measurement up to D = 6.00. The light tables LP 20 and LP 40 have a support for the instruments T 120 and RT 120 and form an integrated measuring system that combines the power of large table systems with the ease of battery-powered portability.

The densitometers T 120 and RT 120 are indispensable for quality control before printing. The most important applications are as follows:

- Test and control of the exposure and development of films.
- Control of the halo of the film.
- Control of the dot-% values of the films particularly for highlights and shadow.
- Calibration of stop-and-repeat machines.
- Control of digital print control elements with dot-%-measurements (for example TECHKON TCS digital).
- Control of tonal transfer for copy.
- Dot-%-measurement for computer-to-plate (Polyester plates).
For Computer-to-Plate it is necessary to have a basis for the calibration of the laser exposure unit. The intensity of the exposure is adjusted according to the solid density of the plate. For density measurements on polyester plates it is possible to calibrate on the plate. The gradation is made on a step control wedge. The **RT 120** offers two possibilities for dot spread measurements: dot spread according Murray-Davies and according to Yule-Nielsen. Dot spread according to Yule-Nielsen indicates the real geometric dot spread. Dot spread according to Murray-Davies takes into account the geometrical part as well as the optical part created by light diffusion around the screen dot called “light capture”.

**Packing list**

- Densitometer T/RT 120 with
  - Charger
  - NiMH - 9V accu
  - Manual
    - Calibrations standard
    - Registration card
  - Set for data transmission
    (only with RT 120 / PC)

**Safety tips**

Please pay attention to the following safety tips:

- Make sure that the available A/C current corresponds to the voltage indicated on the A/C-adapter's decal.
- Use only a NiMH-9V-accu having the size and the specifications of the original accu and pay attention that the maximum charge is not longer than 14 hours.
- Do not try to charge non-rechargeable alcaline battery in the chargers delivered with the instruments. Non-rechargeable batteries could explode by trying to charge them.
- Don’t use normal batteries because these batteries do have a higher inner resistance and therefore the function of the measurement device is no longer granted.
- Make sure that no powder or dust collects in the lower area of the measurement duct.
- Prevent liquids or steam from entering the device.
- Handle the supplied calibration standard with care and choose a dark, dust-free and room-temperature place for storage.
- Only use original TECHKON accessories.
Setting up the measurement device

The device is operated by two function keys and a start key. The device is switched ON and OFF by a separate slide switch.

Turning the measurement device on and off

Turning on: *Push the slide switch of ON.*

Turning off: *Push the slide switch of OFF.*

After 3 minutes the instrument automatically switches to the standby mode to save the battery charge. Shut the instrument off only when not using it for a long period.

Charging the accu

The instrument is equipped with a cadmium-free rechargeable NiMH-9V accu. Please use for replacement only an accu of the same type.

Charge the accu as soon as **LLL** is indicated in display. Remove the accu from the battery case placed on the reverse side of the instrument and recharge it.

The complete charge is reached after 14 hours.

Please only use the charging unit delivered with the instrument.

Requirements for the illuminated area

Use a light table which has a good quality and always measure on the same spot. The illuminated area should always be even and flat. Please consider that most of the luminous tubes change their brightness over a long period of time after switching on. Furthermore, ambient light may influence the brightness. Compensate these sources of errors by repeating the zero calibration.
Calibration

After switching on the instrument or changing the measuring mode **CAL** indicates that a zero calibration should be made. It is possible to start or repeat the zero calibration any time.

Calibration:
1. Position the instrument on the light or white surface.
2. Press the **CAL** key.

The calibration is stored and has to be repeated only if the mode or the material to be measured is changed.

Please note:
For dot-% transmission measurements the calibration has to be done on an unexposed spot of the film thus avoiding the halo of the film influencing the dot-%-value.

Density measurements - T-DEN

**T-DEN mode** measures the densities in transmission.

Measuring density:
1. Select **T-DEN mode** with the **SELECT** key.
2. If necessary do the zero calibration.
3. Position the device on the measurement patch selected.
4. Start measuring with the **start** key.

The measurable density in transmission depends on the luminosity of the light table. Average bright light tables allow you to measure densities up to $D = 5.00$ and over. As soon as the lightness no longer is sufficient the indicated measured value starts flashing. The TECHKON light tables LP 20 and LP 40 allow density measurements up to $D = 6.00$ and over.

Please note:
The emulsion side of the film has to be always on the upper side.
Measuring dot percentage - T-% and T-% NEG

T-%-Mode and T-% NEG mode measures the screen densities in transmission.

Measuring dot percentage:
1. **Select T-% resp. T-% NEG mode with the SELECT key.**
2. If necessary do the zero calibration.
3. **Position the device on the measurement patch selected.**
4. **Start measuring with the start key.**

![RT 120 TECHKON](image)

Measuring dot percentage values

During measurements of negative dot-%-values 100 is indicated after the calibration on the undeveloped film. The measured value on the solid patch is 0%.

**Please note:**
The emulsion side of the film has to be always on the upper side.

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Density measurements - R-DEN (only RT 120)

R-DEN mode measures the densities in reflection.

Measuring density:
1. **Select R-DEN mode with the SELECT key.**
2. If necessary do the zero calibration.
3. **Position the device on the measurement patch selected.**
4. **Start measuring with the start key.**

![RT 120 TECHKON](image)

Measuring density in R-DEN mode

The measureable density in reflection with the TECHKON RT 120 is up to \(D = 2.50\) and over.
**Measuring dot percentage- R-% and R-% NEG (only RT 120)**

R-% mode and R-% NEG mode measures the screen densities in reflection.

The measurement procedures consists of two measurements that are made in sequence. For this a single color’s solid patch and the corresponding screen patch are measured. The order of measurements is irrelevant.

Dot percentage is calculated according to the Murray-Davis formula or to the Yule-Nielsen equation.

The effective dot percentage, which is measured by reflection according to Murray-Davis, consists of two shares: a geometric share and an optical share. The geometric share is the surface relation of screen dots to paper white. The optical share is created through light diffusion around the screen dot designated as ‘light capture’ and the irregular coverage of the screen dots.

This measurement process is especially pertinent for recording copier index lines of print plates and of print index lines for print sheets.

The Yule-Nielsen factor n determines geometric dot percentage. This measurement procedure is used, e.g., for measurements on print plates. For print plates only the geometric share is of interest since only this share is colored and printed.

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**For further information about this topic request our Application Note 3 Dot Spread according to Yule-Nielsen and Application Note 6 Computer-to-Plate with Polyester Printing Plates.**

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**Density values show two digits after the point. Dot percentage values have only one digit after the point.**

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**Measuring dot percentage:**

1. Select R-% resp. R-% NEG mode with the SELECT key.
2. If necessary do the zero calibration.
3. Position the device on the measurement patch selected.
4. Start measuring with the start key.

The total density values are first indicated after every measurement and the dot percentage value is then automatically calculated.

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When measuring negative dot percentage values (R-% NEG) 100 is indicated after calibration on paper white. The solid patch D1 and the screen patch D2 are measured as usual.
Saving solid density

It is possible to memorize measured solid densities for dot percentage measurements.

By saving solid density, the measurement cycle can be restricted to measurement of screen densities when measuring step wedges.

Saving solid density:

• When measuring D1 hold the START key down until the measured value shortly disappears.

The stored value is deleted with CAL.

Entering the Yule-Nielsen factor n

The effective dot percentage, which is measured by reflection, consists of two shares: a geometric share and an optical share. The geometric sector is the surface relation of screen dots to paper white. The optical sector is created by light diffusion around the screen dot called “light capture” as well as the irregular coverage of the screen dots.

By adjusting the Yule-Nielsen factor n, the optical sector can be calculated from the measured effective dot percentage so that only the geometric share is shown.

This measurement process is used, for example, in measurements on print plates. For print plates only the geometric share is of interest since only this share is colored and printed.

The memorized factor n is only active in R-% and R-% NEG mode and is shortly indicated during calibration.

Entering Yule-Nielsen factor n:

1. Select R-% mode with the SELECT key.
2. Calibrate the instrument on the white patch.
3. Measure the solid density and a 50% screen density. Wait until the dot percentage value is indicated.

The screen patch to be measured should be made up, as much as accurately possible, of 50% geometric screen dots. The relation is best seen with rectangular screen dots. At a geometric dot percentage of 50%, when the picture is viewed with a magnifying glass, a chess-square pattern emerges where the tips of the screen dots just touch.
4 Press the SELECT key and hold it permanently down during the following steps.
   • Wait until 1.00 is indicated in display.
   • Switch the instrument off and on again with the slide switch.
   • Wait until the measured dot percentage value is indicated.
5 Increase the value with the CAL key and decrease it with the SELECT key of the visually determined factor of 50%. Please consider that the calculation of the factor n takes a few seconds until the corrected value is indicated.
6 Switch the instrument off and on again with the slide switch. After switching the instrument on again make a few control measurements. During the zero calibration the n-factor shows.

Deleting Yule-Nielsen factors n:
1 Select R-% mode with the SELECT key.
2 Calibrate the instrument on the white patch.
3 Press the SELECT key and hold it permanently down during the following steps.
   • Wait until 1.00 is indicated in display.
   • Switch the instrument off and on again with the slide switch.
   • Wait until 1.00 is indicated in display.
4 Switch the instrument off and on again with the slide switch.

The factor n is deleted if it is not indicated anymore during calibration.
Zero correction for R-DEN

Before measuring, densitometers need to be calibrated to zero on the corresponding paper white of the print sheet. This excludes influences from the paper coloring or surface in evaluating the color layers printed.

For certain applications, however, it makes sense to enter white-reference-values in order to compensate for density divergences caused by the use of differing print mediums.

The maximum correction is \( D = 0.12 \). The adjusted calibration value is the new reference value for white calibration in **R-DEN mode**. Every measured value for reflection will be calculated from the calibration value.

Entering white reference values:

1. **Select R-DEN mode with the SELECT key.**
2. Calibrate the instrument on the white patch.
3. **Hold the CAL key down and switch the instrument off and on again with the slide key.** The display indicates the value 0.00 or an already corrected white reference value between 0.01 and 0.12.
4. **Increase the value with the CAL key and decrease it with the SELECT key.**
5. Switch the instrument off and on again. After switching the instrument on again make a calibration for control measurements. The memorized value indicates in the display.

Slope-calibration for transmission measurements

All instruments are adjusted on the testing standard PSD for transmission densitometer from Bundsverband Druck. For checking calibration use the control wedge delivered with the instrument. To control dot measurement the zero calibration has to be made on the patch no. 1 (0%) of the TECHKON wedge TCR 120P. Density measurement can be controlled on patch no. 9. As the density is very high make sure that the desitometer is in contact with the film in order to avoid the effect of stray light. Besides measurements should always be made on the same patch and possible in the middle of the patch. Variations can be corrected with a slope-calibration.

Correction of slope-calibration for T-DEN

It is possible to adapt the instruments to individual standards or to other densitometer. The correction is limited to ± 10% from the natural uncorrected density value.

Entering slope values:

1. **Select T-DEN mode with the SELECT key.**
2. Calibrate the instrument on the light surface.
3. **Measure the film with the reference density.**
4. **Hold the SELECT key down and switch the instrument off and on again with the slide switch.**
5. **Increase the value with the CAL key or decrease it with the SELECT key until the reference density is indicated.**
6. **Switch the instrument off and on again and make control measurements in T-DEN mode.**
Correction of slope-calibration for T-%

It allows to correct the value in the 50% area with ± 5%. The dot percentage values over and below 50% will then be adapted. No correction is possible for 0% and 100%. The correction allows to adapt the measuring value of soft dots to their real size (soft dots correction).

Entering slope values:
1. Select T-% Mode with the SELECT key.
2. Hold the SELECT key down and switch the instrument off and on again with the slide switch. The display indicates the uncorrected 50%-value or an already corrected value between 45% and 55%.
3. Increase the value with the CAL key and decrease it with the SELECT key.
4. Switch the instrument off and on again with the slide switch. Make control measurements in T-% mode.

Please note:
In T-% NEG mode the corrections are active with the roles reversed.

Correction of the slope calibration for R-DEN

It is possible to adapt the instruments to individual standards or to other densitometers. The correction is limited to ± 10% from the natural uncorrected density value.

Entering slope values:
1. Select R-DEN mode with the SELECT key.
2. Calibrate the instrument on the white patch.
3. Measure the original with the reference density.
4. Hold the SELECT key down and switch the instrument off and on again with the slide switch.
5. Increase the value CAL key and decrease it with the SELECT key until the reference density is indicated.
6. Switch the instrument off and on again and make control measurements in R-DEN mode.

Slope calibration for reflection measurements

All instruments are adjusted on a ceramic standard. For controls made by the user a calibration chart is delivered with the instrument. For checking density measurement, first make a zero calibration on the zero patch of the TECHKON calibration Chart RT 120 and then a density measurement on the black patch of the calibration chart. Variations from the values indicated on the chart can be corrected with a slope-calibration.

Correction of slope-calibration for T-%

It allows to correct the value in the 50% area with ± 5%. The dot percentage values over and below 50% will then be adapted. No correction is possible for 0% and 100%. The correction allows to adapt the measuring value of soft dots to their real size (soft dots correction).

Entering slope values:
1. Select T-% Mode with the SELECT key.
2. Hold the SELECT key down and switch the instrument off and on again with the slide switch. The display indicates the uncorrected 50%-value or an already corrected value between 45% and 55%.
3. Increase the value with the CAL key and decrease it with the SELECT key.
4. Switch the instrument off and on again with the slide switch. Make control measurements in T-% mode.

Please note:
In T-% NEG mode the corrections are active with the roles reversed.

Correction of the slope calibration for R-DEN

It is possible to adapt the instruments to individual standards or to other densitometers. The correction is limited to ± 10% from the natural uncorrected density value.

Entering slope values:
1. Select R-DEN mode with the SELECT key.
2. Calibrate the instrument on the white patch.
3. Measure the original with the reference density.
4. Hold the SELECT key down and switch the instrument off and on again with the slide switch.
5. Increase the value CAL key and decrease it with the SELECT key until the reference density is indicated.
6. Switch the instrument off and on again and make control measurements in R-DEN mode.
2 Light table LP 20 and LP 40

Product description

The TECHKON light tables LP 20 and LP 40 supplies light source for the TECHKON densitometers RT 120 and T 120 for transmission measurements. The constant light intensity is available immediately after switching on and can not be influenced by ambient light. The bright measuring light allows density measurements up to D = 6.00 and over. A surrounding illumination facilitates the selection of the measuring patch.

The densitometer is fixed by the support of the LP 20 / LP 40 and both instruments form an integrated measuring system offering the performance of stationary instruments.

Packing list

<table>
<thead>
<tr>
<th>Light table LP 20 / LP 40 with</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Power supply</td>
</tr>
<tr>
<td>• Charger (only with LP 20)</td>
</tr>
<tr>
<td>• NiMH - 9V accu (only with LP 20)</td>
</tr>
<tr>
<td>• Manual</td>
</tr>
<tr>
<td>- Registration card</td>
</tr>
</tbody>
</table>

Calibration Chart

The calibration chart is valid for 24 months as of the date printed on the card, provided it is properly stored and handled. In case of visible soiling or damage to the measurement patches, the calibration chart will need to be replaced before expiration of validity. Please store your calibration chart dust-free, dry and folded (measurement patches on the inside) in the pocket of the manual.

Before conducting control measurements, always clean the bottom side of the measurement device.
Safety tips

Please pay attention to the following safety tips:

- Make sure that the available A/C current corresponds to the voltage indicated on the A/C-adapter’s decal.
- Use only a NiMH-9V-accu having the size and the specifications of the original accu and pay attention that the maximum charge is not longer than 14 hours.
- Do not try to charge non-rechargeable alcaline battery in the chargers delivered with the instruments. Non-rechargeable batteries could explode by trying to charge them.
- Don’t use normal batteries because these batteries do have a higher inner resistance and therefore the function of the measurement device is no longer granted.

TECHKON Light table LP 20

It is possible to measure films having a width of 20 cm on any spot.

Measuring system densitometer and light table

The densitometer can be connected or disconnected from the support of the light table at any time. After removing the densitometer, it is possible to remove the accu for charging it and to use the densitometer separately, for example for reflection measurements or for transmission measurements on a larger light table.

• Positioning:
  Place the two openings of the densitometer on the drop-in pins of the light table LP 20. Press the densitometer together with the pins until the connection is made.

• Removing:
  Proceed as shown on the picture. Lower the densitometer at the front and lift it at the back. This can be accomplished by inserting a coin between the densitometer and the light table and turning it slightly until the densitometer is disconnected.
Switching on/off

Place the switch on the side on **ON**. The measuring light automatically goes on by lowering the densitometer.

For transportation or if you don’t use the device any longer put the switch in the position **OFF** in order to avoid the measuring light switching on unintentionally.

Mains supply

Use the power supply unit at all times when the mains voltage is available. Please check that the mains voltage corresponds to the voltage indicated on the power supply unit. Only use the power unit delivered with the instrument.

Accu

It is possible to make up to 3000 measurements with the new rechargeable cadmium free NiHM-9V-accu. As soon as the capacity of the accu decreases the red diode starts to glow. Stop working on the accu and carry on working with the power unit.

Charging the accu

The accu is automatically recharged when working with power supply. An overcharge ist excluded. It is possible to accelerate charging by removing the accu from the battery case placed on the reverse side of the light table and to recharge it with the delivered charger.

Half of the capacity is reached after 6 hours and the whole capacity after 14 hours.

The densitometer T/RT 120 and the light table LP 20 are equipped with the same accus which are interchangeable.

Use only the charger delivered with the instrument and the same type of accu.

Replacement of the lamp

The light table is equipped with a special lamp wich guarantees an almost unlimited working time. To replace the lamp it is necessary to open the light table, this can only be done by TECHKON or a TECHKON-authorized service center.
TECHKON Light table LP 40

It is possible to measure films having a width of 40 cm on any spot. For bigger films it is possible to move back the support and to measure any size of film.

Measuring system densitometer and light table

The densitometer can be connected or disconnected from the support of the light table at any time. After removing the densitometer, it is possible to remove the accu for charging it and to use the densitometer separately, for example for reflection measurements or for transmission measurements on a larger light table.

• Positioning:
Place the two openings of the densitometer on the drop-in pins of the light table LP 40. Press the densitometer together with the pins until the connection is made.

• Removing:
Remove the densitometer from one pin and then from the other. For this purpose lift the densitometer as shown on the picture. Do not try to lift the densitometer from both pins at once.

Light table LP 20 and LP 40

Switching on/off

Connect the instrument. Please check that the mains voltage indicated corresponds to the input voltage indicated on the supply unit. Please use only the supply unit delivered with the instrument.

The measuring light automatically operates when lowering the densitometer and goes out after 30 seconds.

If you want to measure films having a larger format without using the support, switch on the measuring light by pressing the switch placed on the right side of the light table LP40.

Replacement of the lamp

The light table is equipped with a special lamp which guarantees an almost unlimited working time. To replace the lamp it is necessary to open the light table, this can only be done by TECHKON or a TECHKON-authorized service center.
3 Technical Data

Densitometer T 120 and RT 120

Measuring functions

- Density transmission: T 120 + RT 120
- Dot % transmission: T 120 + RT 120
- Density reflection: RT 120
- Dot % reflection: RT 120

Measuring range

- Density transmission: 0 - 6.00 ± 0.01 D
- Dot % transmission: 0 - 100 ± 1%
- Density reflection: 0 - 2.5 ± 0.01 D
- Dot % reflection: 0 - 100 ± 1%

Measuring area

- 3 mm slit diaphragm and other
- as options

Power supply

- NiMH-bloc-accu 9V, 120 mAh

Weight

- 130 g (with accu)

Dimension

- LWH 148 x 56 x 22 mm

Light table LP 20

- Measurable width of film: 20 cm
- Luminous spot: 35 mm
- Power supply: battery running and power supply with 100 - 240 V
- Dimension: LWH 158 x 80 x 20

Light table LP 40

- Measurable width of film: no limited
- Luminous spot: 48 mm
- Power supply: power supply with 100 - 240 V
- Dimension: LWH 256 x 105 x 22 mm

Glossary

Calibration

Calibration is the zeroing of the densitometer on the respective paper white of the run paper (reference white). Calibration measures the reflected light of the paper white and declares a density of zero for this value.

Calibration chart

Chart supplied with the densitometer on which a white patch and a black patch are printed for exact determination of their respective density values.

Characteristic printing curves

Printing curves are curves that graphically represent the functional connection between dot percentage of the screen value of the master copy and the screen value on the print plate.

Densitometer

Densitometers are density measurement devices for reflection and transmission measurements in reproduction and print.

Density

Optical density is a logarithmic number which is calculated from the relation of absorbed, resp. diffuse reflected light compared to an “absolute white”, e.g. a reference surface.

Technical changes reserved ©TECHKON 1999
Dot gain
Dot gain is the result of the difference between the known screen value on the film and the measured screen value on the print control strip.

\[ DG = DP - REF(\%) \]

DP = Dot percentage
REF = Halftone percentage values of the print control strip

Dot percentage
Dot percentage is the part of a screen patch that is covered with print color. It is calculated according to the Murray-Davies formula as follows:

\[ DP = \frac{1-10^{DD}}{1-10^{SD}} \cdot 100(\%) \]

SD = Solid density
DD = Screen density

Print index line
Print index lines are curves that graphically represent the functional relation between dot percentage of the screen value on the film and the screen value on the print. Print index lines illustrate the adherence to the transfer function film/print. The print index line is only valid for the respective combination of print color, paper, rubber sheets and print plate for which it has been determined.

Screen density
The density measured on a screen patch expressed as ratio of printed and unprinted surface.

Screen patch
The screen patch consists of single dots that may be shaped and ordered differently.

Screen percentages
Screen percentages are the dot percentage ratios of screen dots and the paper white of a screen patch expressed in percentages.

Solid density
This is the color density of a solid patch.

Yule-Nielsen factor
The Yule-Nielsen formula is the Murray-Davies formula extended by the factor n for calculation of dot percentage. Factor n describes the optical share of effective dot percentage. With the Yule-Nielsen formula measured dot percentage can be corrected so that only the geometric share of effective dot percentage is calculated. The geometric share of dot percentage is calculated according to the Yule-Nielsen formula as follows:

\[ DP = \frac{1-10^{\frac{DD}{n}}}{1-10^{\frac{SD}{n}}} \cdot 100(\%) \]

SD = Solid density
DD = Screen density
Manufacturer Certificate

Instrument: Densitometer T 120 / RT 120
Serial number: 

Manufacturer: TECHKON GmbH
Support material: Manual, calibration chart

Norms:
The instrument has been controlled by the manufacturer on color standards whose colorimetric functions have been measured by the BAM (Bundesanstalt für Materialprüfung) and have been confirmed by a control certificate.

The calculation of the densitometric values is made according to equations described in the norm DIN 16 527 part 3, ISO 5-3 and in the manual for standardisation of BVD (Bundesverband Druck E.V.) and FOGRA (Forschungsgesellschaft Druck e.V.).

CE label:
The instrument fulfills the european directive 89/336/EWG concerning the Electromagnetic Compatibility (EMC) and is provided with the CE label.

Examinations:
The values on the calibration chart refer to ceramic standards used by TECHKON in the basic calibration of the device.

When examining the device with the calibration chart, readings should not deviate more than $D = \pm 0.02$ from the values on the calibration chart. If they do, a new calibration is required. Repeat examinations every two months.

Calibration chart:
The expiration date of the calibration chart is 24 months as of the date printed, provided it is properly stored and handled. Should the chart be visibly soiled or the measurement patches be damaged, the calibration chart needs to be replaced before the expiration date. Please store the calibration chart dust-free, dry and folded (measurement patches on the inside) in the pocket of the manual.

Before conducting control measurements, clean the lower side of the measurement device.

Maintenance:
24 months has emerged as a good interval for regular inspection. Inspections can only be performed by TECHKON or a TECHKON-authorized service center.

Date Signature

______________________________

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