

NIP USER MANUAL

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countröll®



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Welcome

Dear customer,

Congratulations on your purchase! Thank you for using our countroll® app and nip measurement devices. The following pages explain the steps to perform a correct nip measurement of your rollers.

Suppose you use the app and devices in combination with our countroll® online platform. In that case, you get access to the following extra benefits:

- Saving the nip measurements of each roll
- Having an overview of all past measurements of each roll
- Automatic crown correction calculation when using 3 measurement points (left, center and right)

You can email us at info@countroll.com if you still have questions after reading this guide.

About nip measurement

The nip is the point of convergence between two rolling parts. It is an essential part of achieving optimal product quality.

The purpose of a nip measurement is to detect deviations in those connecting parts between the rollers. Deviations can cause problems like materials that don't stick together well or print images that don't look right..

Some examples of such deviations are:

- Misalignment of two rollers
- Unequal pressure
- Straining of rubber coating
- Bad crown factor

Operating conditions

The right to a warranty is no longer valid if any of the following causes a problem.



The device may only be used with rolls between -10°C and 60°C.



The pressure on the device may not exceed 33 daN/cm².

What do you need

To start the nip measurements, you need the following:

- case with the nip measurement devices
- countroll® app

Case contents

The nip measurement devices are delivered to you in a case. The case contains the following items:

#	Item	Picture
3	nip measurement device with nip strip	
3	spare battery	

#	Item	Picture
2	spare strip	

Getting started

Installing the countroll® app

1. Download the countroll® app on Google Play.

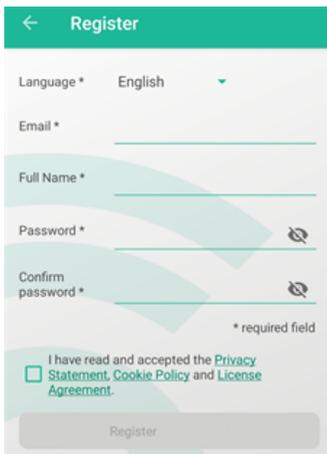


The countroll® app is only available for Android at the moment. iOS support is planned for Q1 of 2023.

2. Install and open the app.
3. Do one of the following:
 - If you already have a countroll® account, sign in.
 - If you do not have a countroll® account, create one and log in.

Creating a countroll® account

1. Open the countroll® app.
2. Select **Register**. The following window opens:



3. Select the language of the interface from the drop-down menu. Available languages are:
 - English
 - German
 - Dutch
 - French
 - Polish
 - Russian
 - Spanish
4. Enter your email address, full name, and password.
5. Select the checkbox next to **I have read and accepted the Privacy Statement, Cookie Policy, and License Agreement**
6. Select **Register**.



After registering, you can use the same account to access the web portal: <https://app.countroll.com>.

Removing the nip measurement devices from the case

1. Grab the outer end of the strip and the device itself.



2. Carefully pull the strip and device from the black foam.



Handle with care. Make sure not to bend the strip too much. This can damage the electronics inside.

Perform a nip measurement

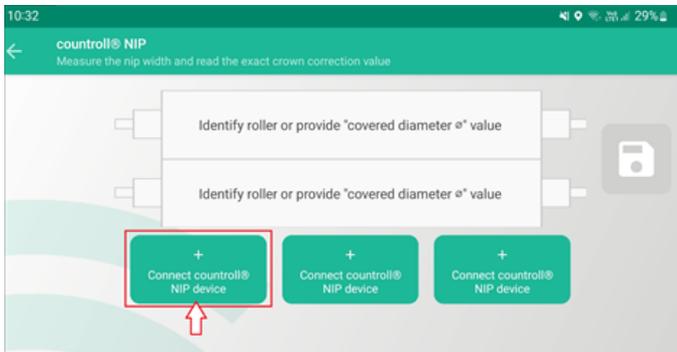
How to connect your devices with the app

Before you begin, turn on Bluetooth on your device.

1. Open the countroll® app and log in.
2. Select **countroll® NIP**.



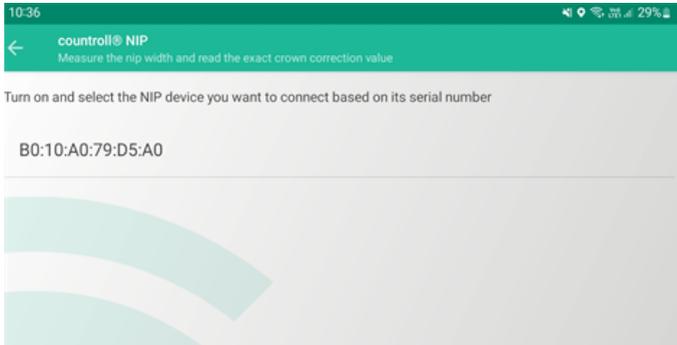
3. Select **Connect countroll® NIP device**.



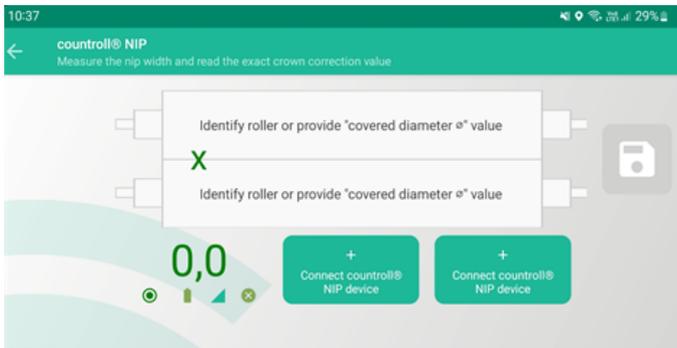
4. If you did not turn on Bluetooth at this point, you get a message that asks you to do so. Select **Yes**.
5. Press the silver button to switch it on.
A blue LED starts flashing.



6. Select the serial number that appears on the app.



7. Once the connection is established, the value on the app displays 0.0. The color of the value matches the LED color of the device.



8. Repeat steps 3 through 6 for adding more nip devices. For each device that is connected, 4 icons appear under the value in the app:

-  Color indicator of the LED
-  Battery status
-  Bluetooth signal strength
-  Disconnect and turn off the nip device.

You can now move on to the actual measurement procedure:

- If you want to perform a simple nip measurement, choose the "Basic measurement procedure" on the facing page.

- If you also want to store your nip measurements history on the countroll® platform, please select the "Advanced measurement procedure" on page 15.

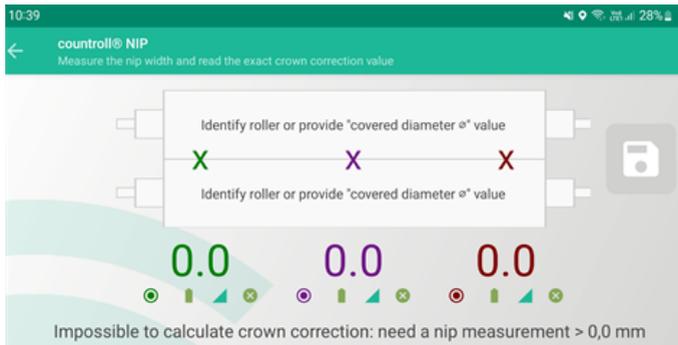
Basic measurement procedure

The basic measurement procedure does not require the use of the countroll® online platform. If you want to benefit from all the features of the online platform, follow the instructions in "Advanced measurement procedure" on page 15.

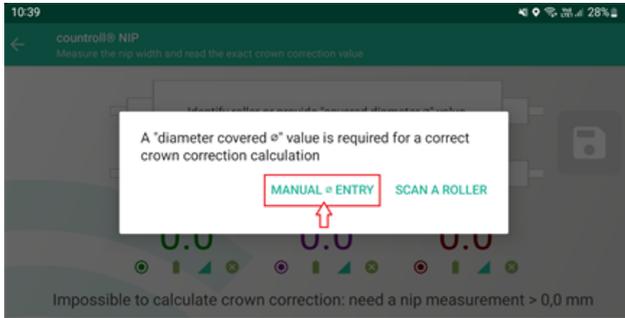
Manually identifying rollers (optional)

Manually identifying rollers ensures that you can see the recommended crown correction.

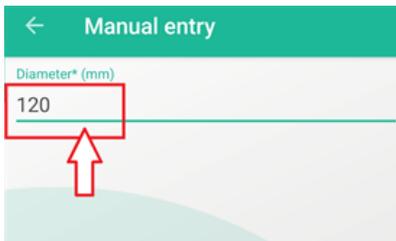
1. Choose **Identify roller or provide "covered diameter \varnothing " value.**



2. Select **MANUAL \varnothing ENTRY.**



3. Enter the diameter in the input field and select **Save**.



4. The diameter of the roller appears next to the roller in the app.



How to measure the nip

You can measure the nip using 2 or 3 points.

1. To start, do one of the following:
 - For 2-point measurement, insert one strip left and one on the right in between the rollers.
 - For 3-point measurement, insert one strip left, one right, and one in the middle in between the rollers.

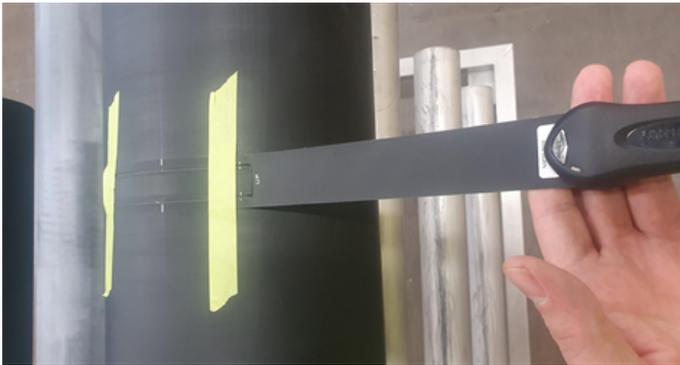


Avoid getting your fingers caught between the rollers while inserting the strips.

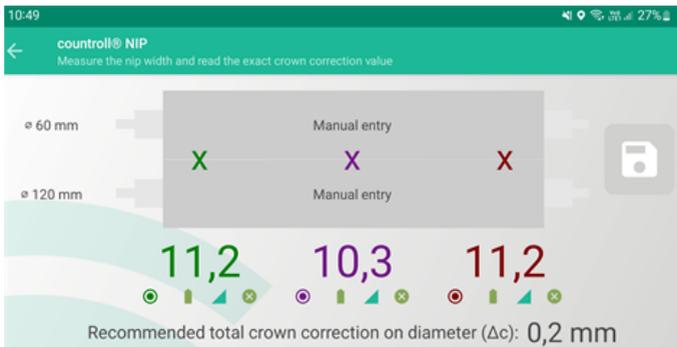


Strips can be held in place by taping them on the roller. The alignment of the sensing area is important:

- Draw a straight line on the roller and stick the 3 strips with tape on the roller.
- Avoid applying too much pressure. See "About nip measurement" on page 5.



The nip measurements appear in the app.



The nip measurements in the app change automatically when the pressure between the rollers is changed.

The recommended crown correction also appears if you have identified the rollers. This is only available for 3-point measurements.

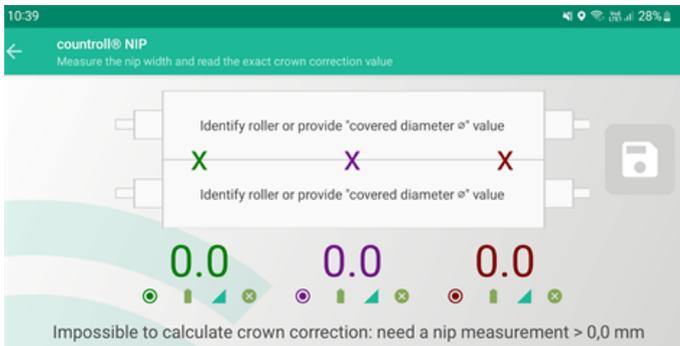
Advanced measurement procedure

The advanced measurement procedure includes using the countroll® online platform. If you want to do a simple measurement, see "Basic measurement procedure" on page 11.

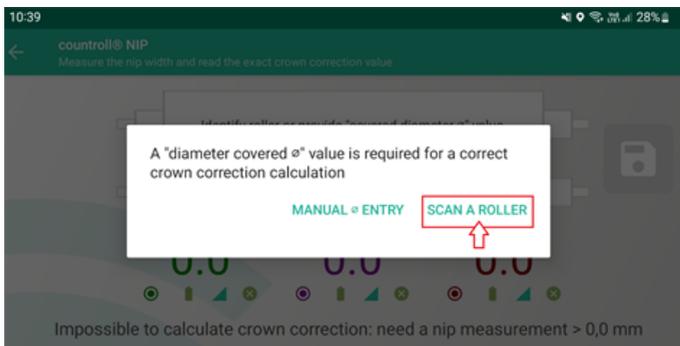
Identifying rollers with a QR code or roller ID (optional)

By using a QR code or roller ID to identify rollers, you can see the recommended total crown correction and save the measurement information on the online platform.

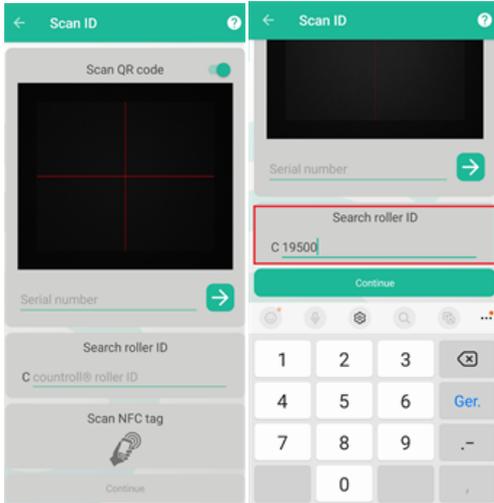
1. Select **Identify roller or provide "covered diameter \varnothing " value.**



2. Select **SCAN A ROLLER.**



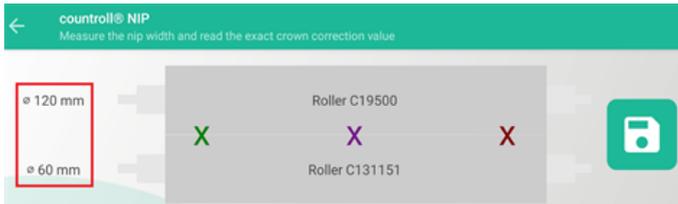
3. Scan the QR code on the roller or enter the roller ID manually and select **Continue**.



Example of a QR code:



4. The roller diameter fetched from the countroll® database appears next to the roller in the app.



How to measure the nip

You can measure the nip using 2 or 3 points.

Refer to "How to measure the nip" on page 12 in the basic measurement procedure.

For the advanced measurement method, there is also the option to save the nip measurements on the online platform's timeline for the selected rollers.



1. Click on the  icon to save the measurements.

How to turn off the nip devices

Do one of the following:

- Press the silver button on the device for 3 seconds.
- Press the  button of the device in question in the app.

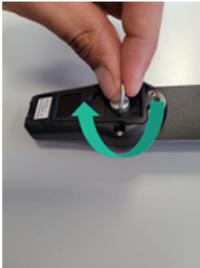
Replace the battery and strip

How to replace the battery

1. Turn the ring attached to the device 90°, lift the cover, and use the tip of the cover to go underneath the battery



2. Insert the new battery and put the cover back on, turning the ring 90° clockwise.

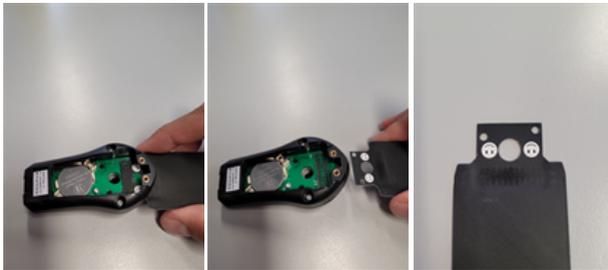


How to replace the strip

1. Turn the ring attached to the device 90° counterclockwise, lift the cover, and use the tip of the cover to go underneath the strip and lift it up from the printed circuit.



2. Take out the strip, insert a new strip, and make sure to align the connectors on the strip and the printed circuit correctly. There are emoticon indicators on the strip. The strip is inserted correctly when the smiley faces are facing up.



3. Put the cover back on and turn the ring 90° clockwise.



Specifications

Nip module (l x w x h)	75 mm x 40 mm x 25 mm
Strip dimensions (l x w)	354 mm x 35 mm
Strip: length of sensing area	110 mm
Strip: width of sensing area	14 mm
Battery type	CR2032
Battery life	2 years at 8 hrs/week
Weight nip module	24 g
Max working temperature	-10° to 60°C
Measuring accuracy	0,1 mm
Wireless range	10 m
Max pressure	33 daN/cm ²
Warranty	2 years on hardware (device)

Support

If you have any questions or concerns, please get in contact with our customer care staff.



info@countroll.com