

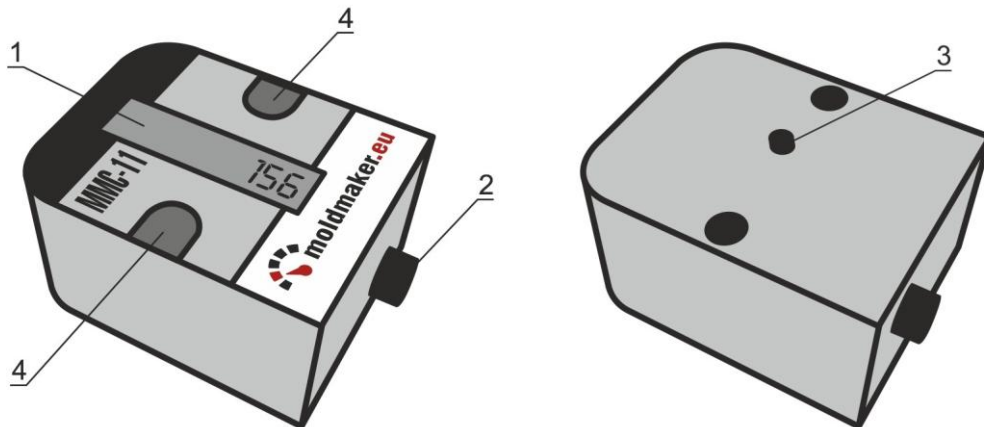
CYCLE COUNTER MMC-11



USER'S MANUAL

1. GENERAL

The counter is used to count the number of cycles of injection molds, stamping tools, dies or other devices performing cyclic operations.



Description of main elements:

1. LCD display
2. Cycle button
3. Disassembly sensor
4. Mounting holes

Technical parameters:

Power supply 3,6V built-in lithium battery.

Battery lifetime 5 years.

Maximum LCD indication 99 999 999.

Maximum counting value is 4 000 000 000 (available wirelessly only)

Working temperature -20 do +85 °C.

Dimensions: 48x38x25 mm

Mounting screws M4 x 35 allen with cylinder head or No.8-32 0.164".

General informations:

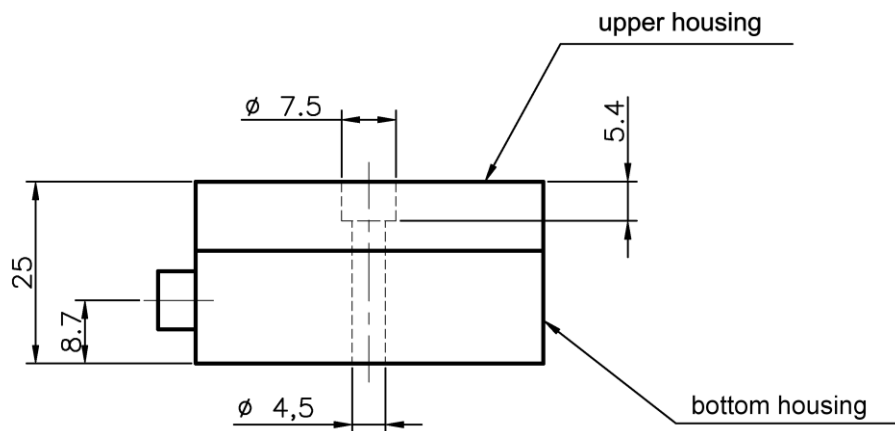
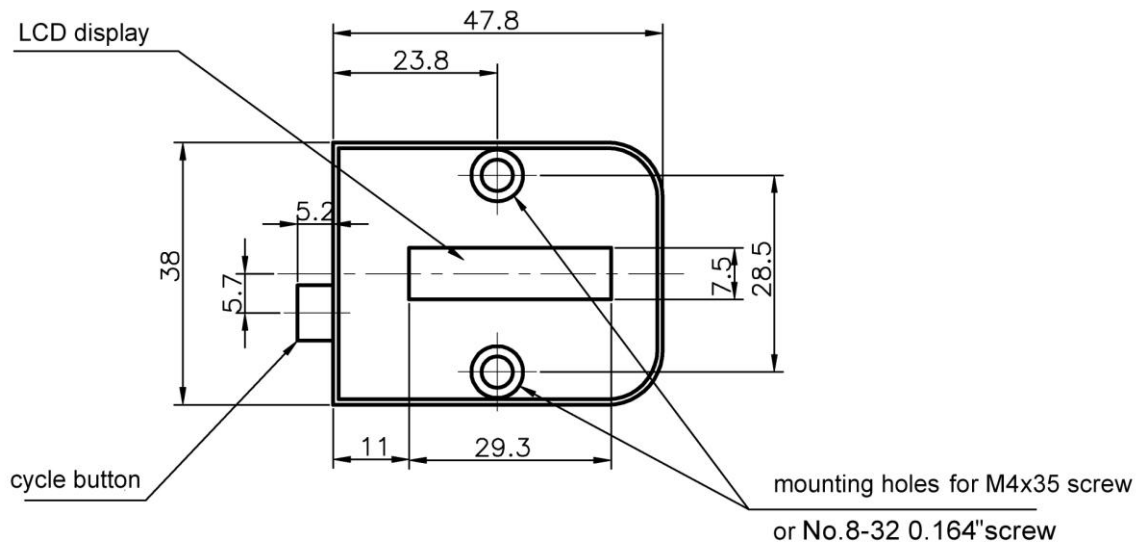
The counter is delivered as inactive. After pressing the main button "Inactive" appears on the LCD display. Activation can be done using the MoldMaker Scan application, which can be downloaded from Google Play for Android devices. For more information please follow this manual.

Requirements for the MoldMaker Scan application:

- android 4.2 or newer
- Bluetooth 4.0 LE module
- NFC communication interface

LCD display messages:

	Inactive counter. Message visible after pressing the main cycle button and or disassembly sensor for the inactive counter. Activation is required for normal operation.
	Message about exceeding the programmed value of counter reminder about service inspection of the mold, maintenance, punch, etc.
	Temperature exceeded 70 ° C.
	Low battery voltage. Counter battery replacement required by an authorized service center.
	Flight mode is enabled. Bluetooth transmitter is OFF. The counter is not transmitting any signals.
	The counter is in the NFC field of the reader.
	Communication error with the NFC interface.
	Communication error with the radio module.
	Communication error with the NFC chip and radio system.



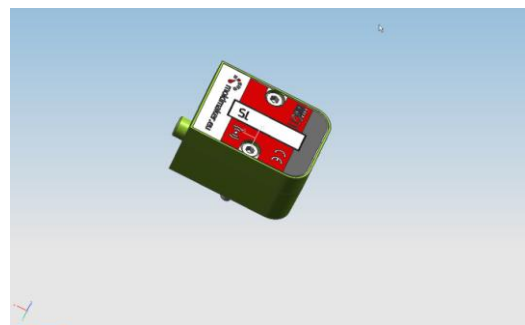
Counter dimensions MMC-11

3D model (including subtraction solid) for tool design is available here:

<http://moldmaker.eu/panel/download>

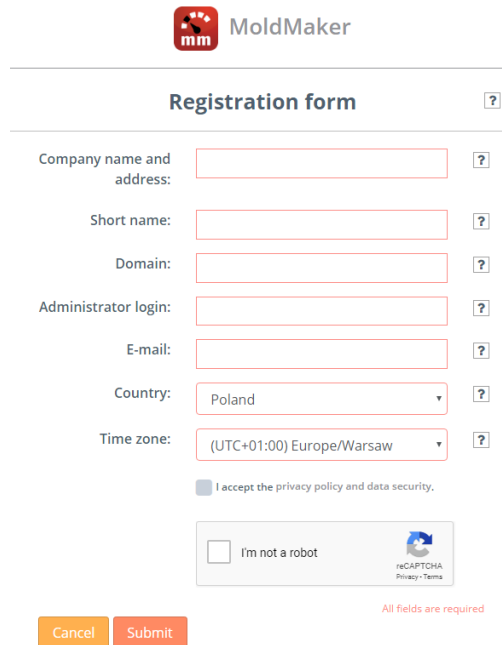
Declaration of conformity is available here:

<http://moldmaker.eu/panel/download>



2. CREATING AN ACCOUNT IN MOLDMAKER SYSTEM

Go to <https://www.moldmaker.eu> and select the option "Register".

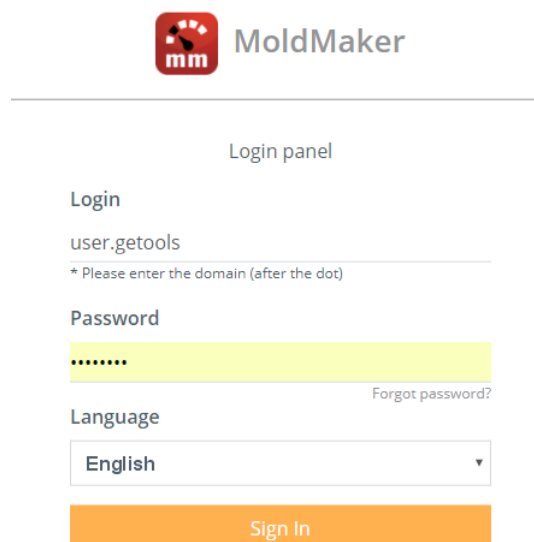


The registration form is titled "Registration form" and includes the following fields: "Company name and address:", "Short name:", "Domain:", "Administrator login:", "E-mail:", "Country:" (with a dropdown menu showing "Poland"), and "Time zone:" (with a dropdown menu showing "(UTC+01:00) Europe/Warsaw"). There is a checkbox for "I accept the privacy policy and data security." and a reCAPTCHA widget with the text "I'm not a robot". Below the form are "Cancel" and "Submit" buttons. A red note at the bottom right says "All fields are required".

After completing the registration process, a new business account will be created for the user with administrator rights. You can now log into the system.

3. LOGGING IN MOLDMAKER SYSTEM VIA MOLDMAKER SCAN APPLICATION

Go to <https://www.moldmaker.eu/panel> and log in.

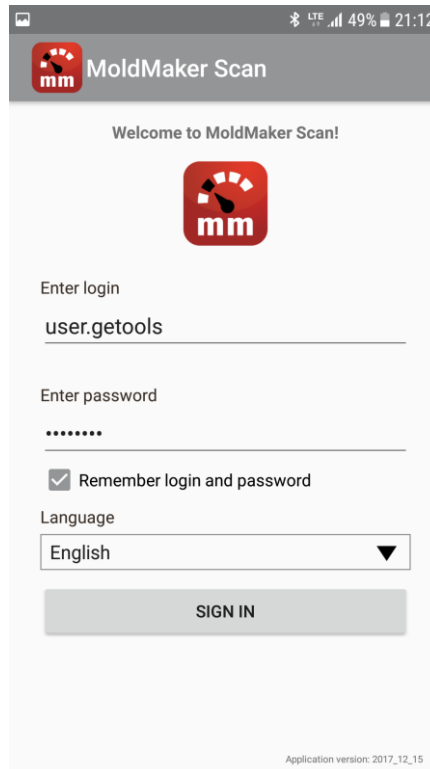


The login panel is titled "Login panel" and includes the following fields: "Login" (with the text "user.getools" and a note "* Please enter the domain (after the dot)"), "Password" (with a masked password field and a "Forgot password?" link), "Language" (with a dropdown menu showing "English"), and a "Sign In" button.

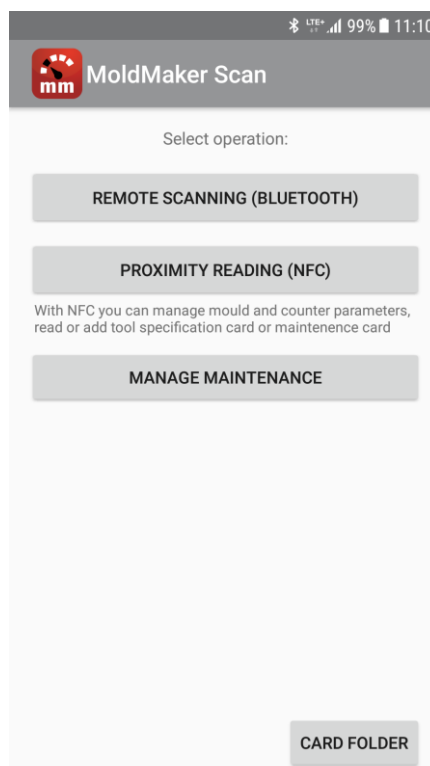
Enter your login and password provided in the registration process.

4. COUNTER ACTIVATION

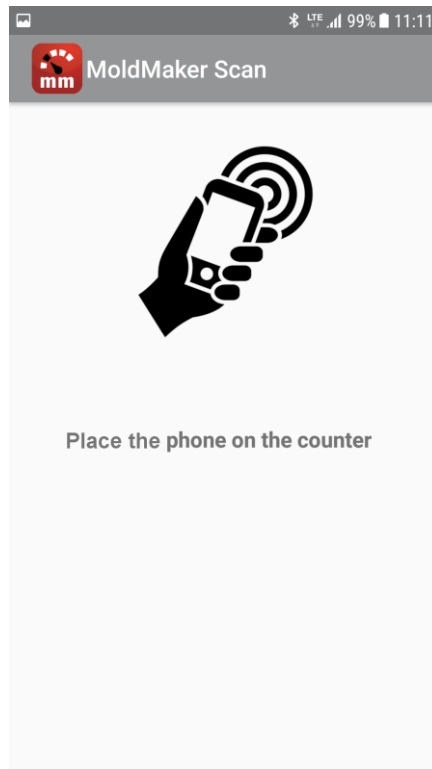
A brand new counter is in the inactive mode. Proceed the steps below to activate the counter.



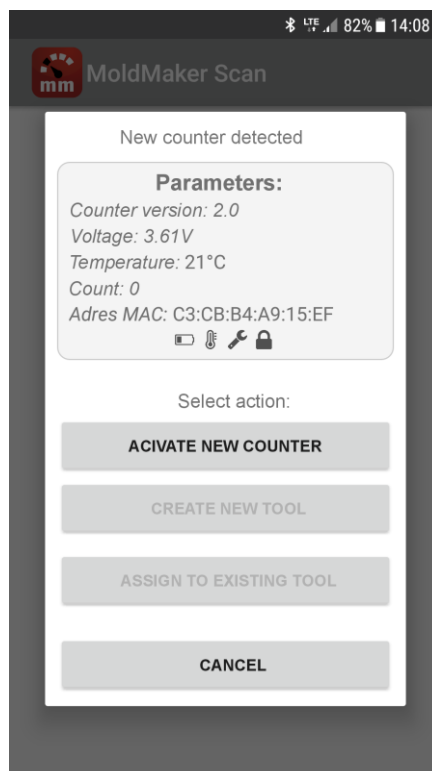
Log in. You must have an account on the site <https://www.moldmaker.eu/panel>



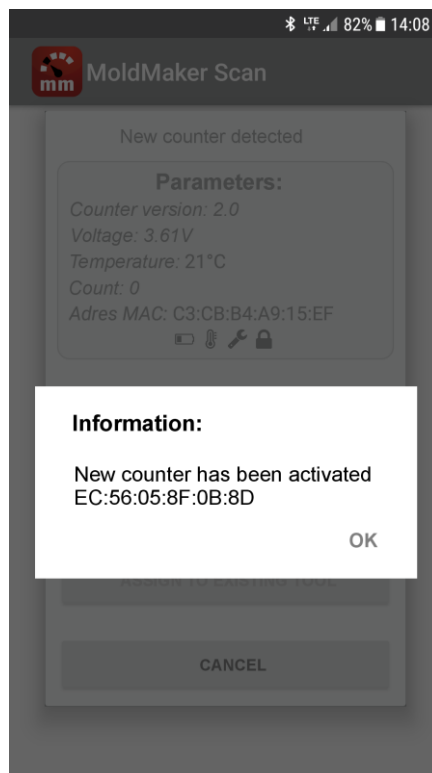
Select "Proximity Reading (NFC)" option.



Place your phone on the counter.



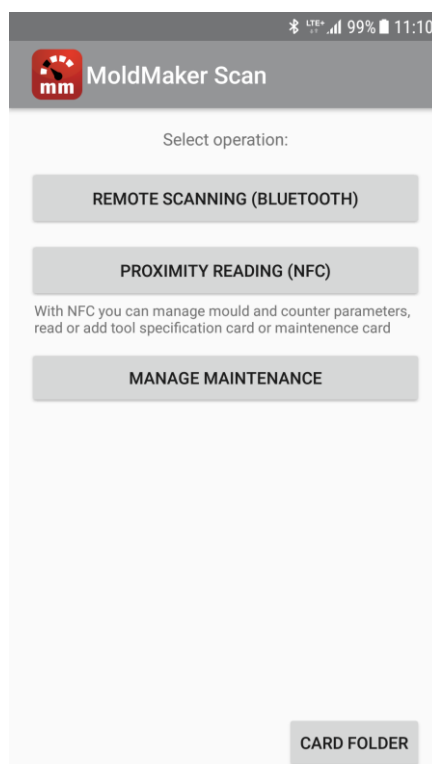
Select "Activate New Counter" option. The counter will be activated.



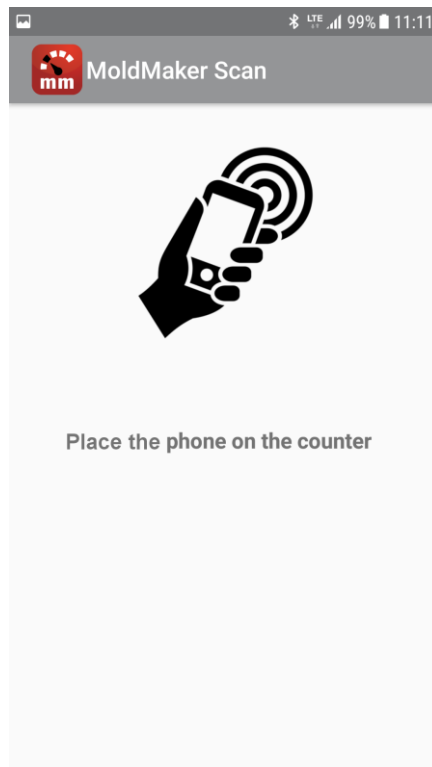
The activation process has been completed

5. ADDING NEW TOOL WITH NEW COUNTER ASSIGNMENT

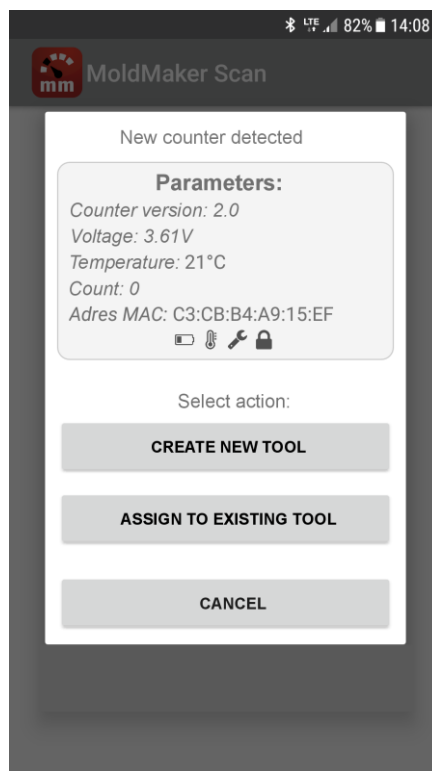
Login to MoldMaker Scan mobile application.



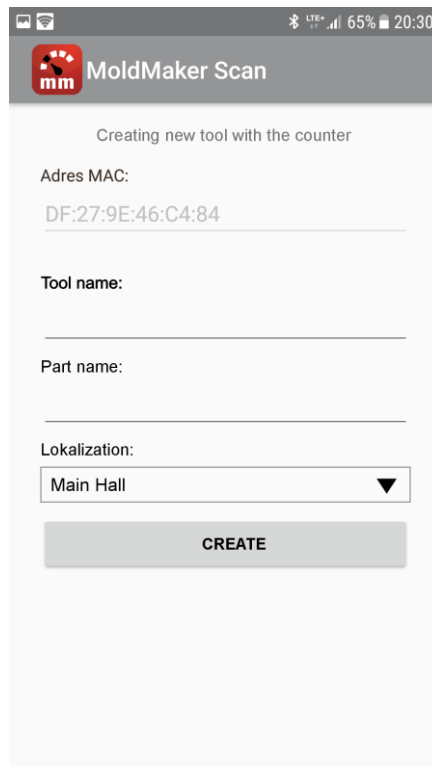
Select "Proximity Reading (NFC)" option.



Place your phone on the counter.

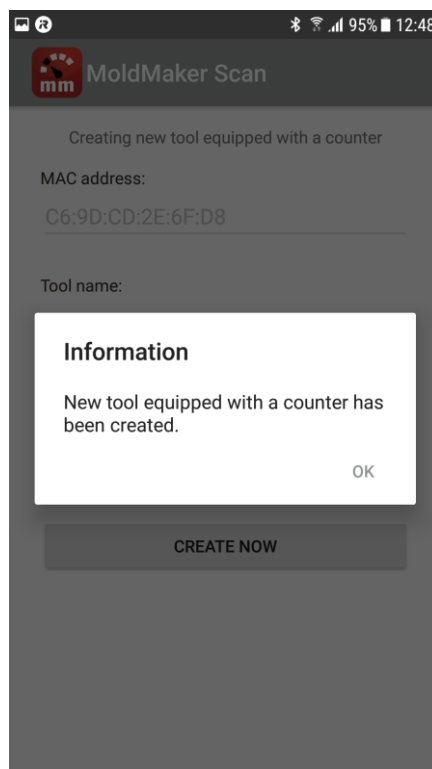


Select "Create New Tool" option.



The screenshot shows the 'MoldMaker Scan' app interface. At the top, it says 'Creating new tool with the counter'. Below this, there are several input fields: 'Adres MAC:' with the value 'DF:27:9E:46:C4:84', 'Tool name:', and 'Part name:'. There is also a 'Lokalizacja:' dropdown menu currently set to 'Main Hall'. At the bottom, there is a grey button labeled 'CREATE'.

Enter data: tool name, part name and select the location. Then press "Create".

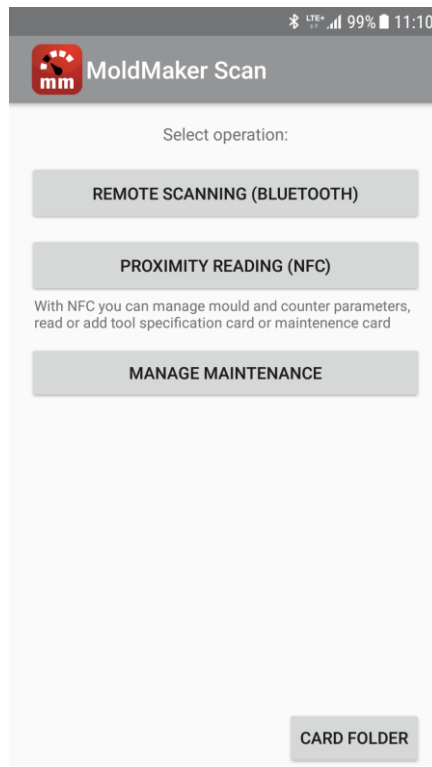


The screenshot shows the 'MoldMaker Scan' app interface after the tool has been created. It says 'Creating new tool equipped with a counter'. The 'MAC address:' field shows 'C6:9D:CD:2E:6F:D8'. Below this, there is a white dialog box with the title 'Information' and the text 'New tool equipped with a counter has been created.' and an 'OK' button. At the bottom, there is a grey button labeled 'CREATE NOW'.

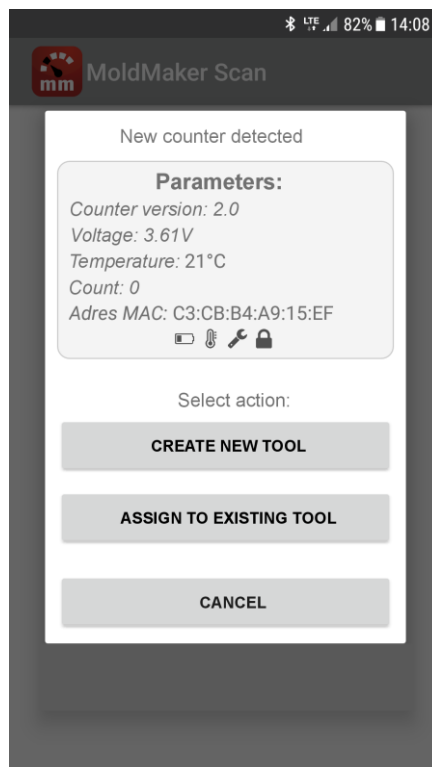
Confirmation message. New tool with assigned counter has been created.

6. ASSIGNING THE COUNTER TO THE EXISTING TOOL

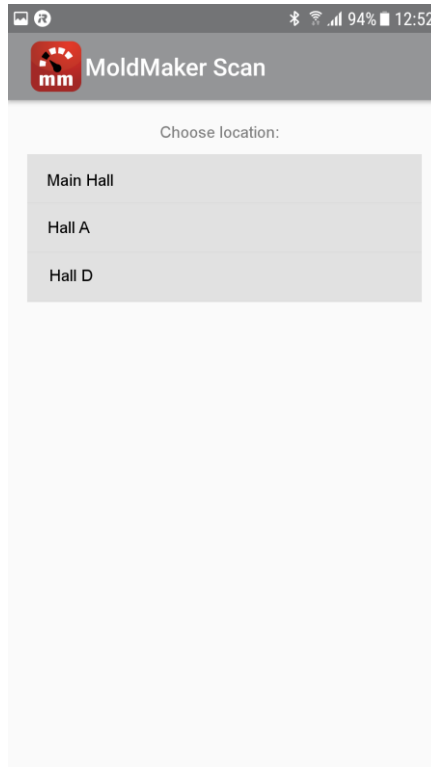
Login to MoldMaker Scan mobile application.



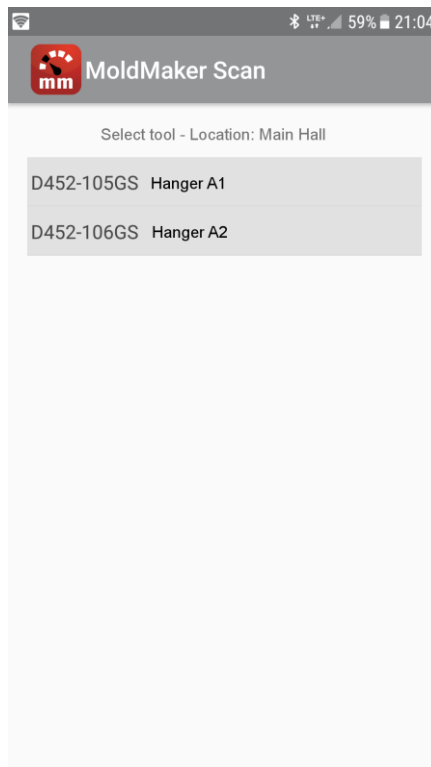
Select the "Proximity Reading (NFC)" option.



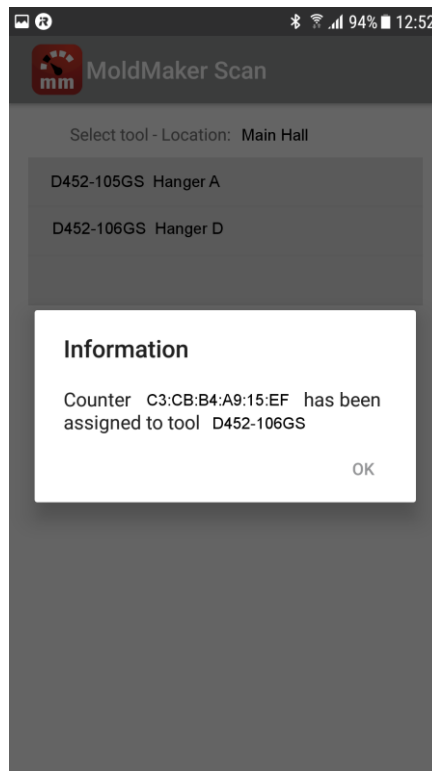
Choose "Assign to Existing Tool" option.



Choose location of existing tool.



Select the appropriate tool to which you want to assign a counter.

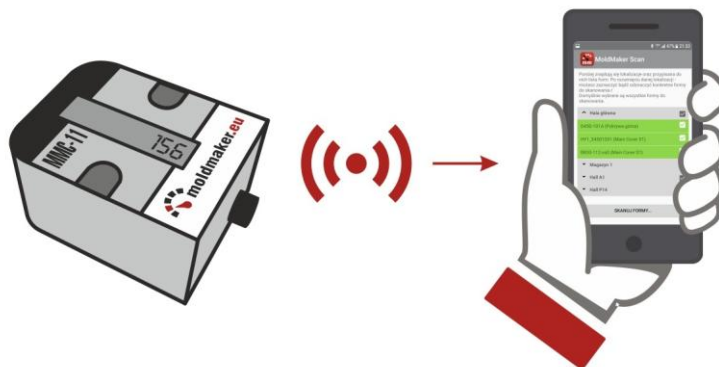


Confirmation message. The counter is now assigned to existing tool.

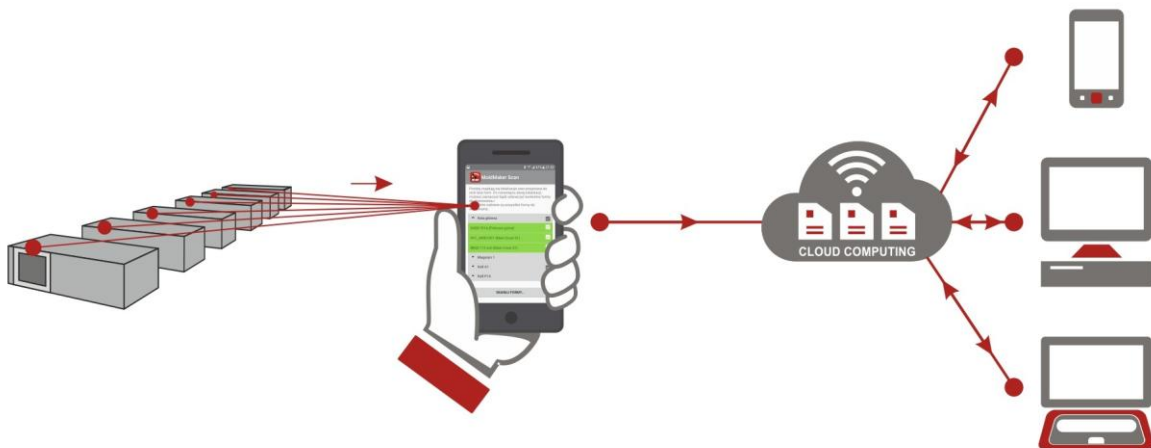
7. REMOTE SCANNING

7.1 Scanning via mobile devices (on demand).

The value of the counter can be scanned wirelessly from a distance of up to 30m using a smartphone or tablet via the MoldMaker Scan application installed.



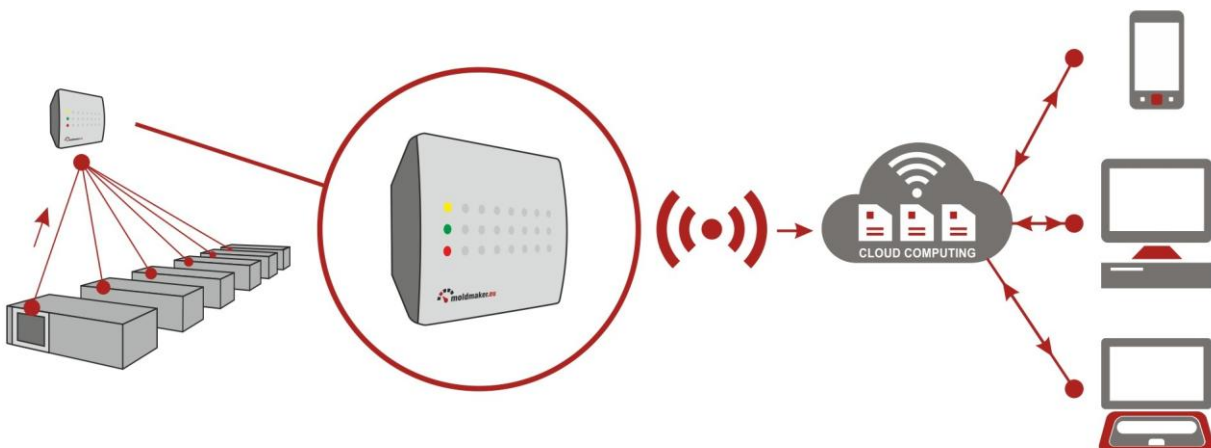
Scanning of 1 counter.



Scanning of many counters in range.
Over 300 counters can be scanned at the same time in a few seconds.

7.2 Automatic scanning.

Optionally, remote scanning can be performed using MMCD Concentrator device which automatically and constantly scans all counters in range and sends received data to the server.



7.3 Configuration and proximity reading

The counter configuration can be done via the NFC proximity communication interface using a smartphone or tablet with the MoldMaker Scan application installed.

In this way, depending on the needs, it is possible to do:

- activation of the counter - see point 4.
- assigning the counter to the tool - see point 5 and 6.
- removing the counter assignment to the tool - you can use it, if necessary, to move the counter from one tool to another (press: Proximity Reading (NFC) -> Other ->

- Remove assignment from tool)
- identification of an unknown tool - by placing a smartphone to the counter installed in an unknown tool, you can easily identify this tool (press: Proximity Reading (NFC))
- reading Tool Cards used to get acquainted with detailed technical data of a given tool (press: Proximity Reading (NFC) -> Tool Card))
- read and write Service Cards - you can view and add new entries to the service card register for, among others, to confirm technical inspections or proceed with typical tools maintenance (Press: Proximity Reading (NFC) -> Service Cards)
- providing access for toolmakers or subcontractors - functionality used to transfer tools between companies. There are 2 possible cases:
 - transferring the tool to the subcontractor - the subcontractor confirms the acceptance of the tool for its stock and obtains "read only" access to all parameters of the tool. The owner of the tool may oblige the subcontractor to read the counter's status regularly, thus obtaining the possibility of remote control of the tool's operation, information about the number of injections made, unexpected tool stops and is notified when the counter is disassembled from the tool. (press: Proximity Reading (NFC) -> Other -> Share Tool))
 - transferring the tool to the toolmaker - the tool shop confirms the acceptance of the tool for its stock and obtains "Full" access to read and write all parameters, for eg. Service Cards entries, Tool Card entries, etc. The owner gets information about the activities performed on the tool. (press: Proximity Reading (NFC) -> Other -> Share Tool)
- changing the orientation of the LCD display - you can easily rotate the counter display upside down when the counter is mounted in the reversed position. (press: Proximity Reading (NFC) -> Other -> Rotate LCD)
- reading a tool basic tag - contains, value on the counter, owner's name, tool name, part name, temperature, MAC address.



Configuration and proximity reading via the NFC communication interface.

7.4 Disassembly sensor

The counter is equipped with a disassembly sensor located on the back of the housing for general use related to production safety monitoring. If there is a need for strict monitoring of the quantity of produced parts, then the user may activate "Disassembly sensor monitoring", thus he will be immediately notified when the counter is disassembled from the tool. The exact time of each detected disassembly will be saved in the counter's history for further analysis.

7.5 Service notification on LCD display

The counter is equipped with advanced built in functionality called "Show "SERVICE" notification on LCD display".

This functionality is linked to the maintenance schedules supported in MoldMaker system. Thanks to this functionality, after reaching the value on the counter set in the corresponding maintenance schedule, the word "SERVICE" will be blinking on display.

Regardless of enabling/disabling this functionality, MoldMaker system will normally perform service reminders displaying the appropriate icons in the MoldMaker main tool table.

Enabling this functionality will require the user to synchronize the schedule with the counter using the MoldMaker Scan mobile application.

The necessity of synchronization for a given tool will be signaled in the schedule window by means of the red NFC icon.

In order to synchronize, use the "Manage Maintenance" button in the MoldMaker Scan mobile application. When pressed, the application will ask you to place the phone on the counter and it will automatically synchronize. Duration approx. 1 sec.

Lack of synchronization by the user may cause that the word "SERVICE" will be displayed on the counter at a different moment than set in the schedule.

8. REMOTE PRODUCER'S SUPERVISION

To ensure the highest reliability of all operating counters, the MoldMaker system continuously monitors the operation of all counters in terms of:

- the state of the battery life
- exceeding the permissible operating temperatures
- reported errors

If necessary, the MoldMaker system will notify the user in advance about the need to carry out service activities, eg. replacing the battery.

Please note: due to ensuring the highest quality and reliability, the counters are designed as no-disassembleable devices. The user has no possibility to exchange the battery itself. The battery can only be replaced by an authorized service center. Possible attempts to open the housing by itself will result in damage of the housing or electronic module and loss of warranty.

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