

Firmware Update Tool for INHECO Control Units (MTC / STC)

For Update Tool

► **User's Manual**

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1 IMPORTANT NOTES

1.1. General Information

Read the user instructions completely. The instructions for use explain the intended use of the Update Tool Software for all INHECO Control Units "Multi TEC Control" (MTC) and "Single TEC Control" (STC). In case the instructions of this manual are disregarded, injury or product damage cannot be excluded.

Missing or insufficient knowledge of the manual leads to loss of liability against INHECO GmbH.

This manual is part of the TEC Control Unit (MTC/STC) and must be retained until the Unit is disposed and must be passed on with the TEC Control Unit when the unit is taken over by a new user.

The TEC Control Unit meets the acknowledged rules of technology and complies with today's standards.

Manual instructions must be followed in order to ensure safe handling of the Unit.

- The signal word NOTE stands for the general precautionary measures that are to be observed to avoid damaging the device when using it.

Contact INHECO in case there are any uncertainties of how to operate or how to handle the TEC Control Unit.

Your opinion about this manual provides us with valuable insights on how we can improve this document. Please do not hesitate to direct your comments to sales@inheco.com, → How to contact INHECO, below

1.2. How to contact INHECO

INHECO GmbH	
Address	Fraunhoferstr. 11 82152 Martinsried Germany
Telephone - Sales	+49 89 - 899593 - 101
Fax	+49 89 - 899593 - 149
E-Mail - Sales	sales@inheco.com
E-Mail - Technical -Hotline	techhotline@inheco.com
Website	www.inheco.com

2 PRODUCT DESCRIPTION

2.1. Intended Use

The INHECO Update Tool is a software to update the firmware of the INHECO Multi TEC Control (Part#: 8900030) and Single TEC Control (Part#: 8900031). This manual describes the upload process and requirements for a successful upload.

2.2. Requirements

- Computer with internet access and USB interface.
- MTC/STC unit(s) with USB and power cables.

Helpful:

- printer to print out upload keys or medium to save the upload keys
- When you cannot print or save the keys: a piece of paper and a pen

3 STEPS OF THE UPDATE PROCESS

3.1. Get your User name and Password to access the "Customer Login Area"

Please ask for your User name and Password via INHECO's website or by email (info@inheco.com).

- Use the link [Login](#) on our website www.inheco.com



Fig.1: Login

- [User name](#) and [Password](#) are needed to enter the "Customer Login Area".
- Enter your [User name](#) and [Password](#).
- If you forgot your password or if you do not have one at all use the "Forgot Password Area" to request a new password.

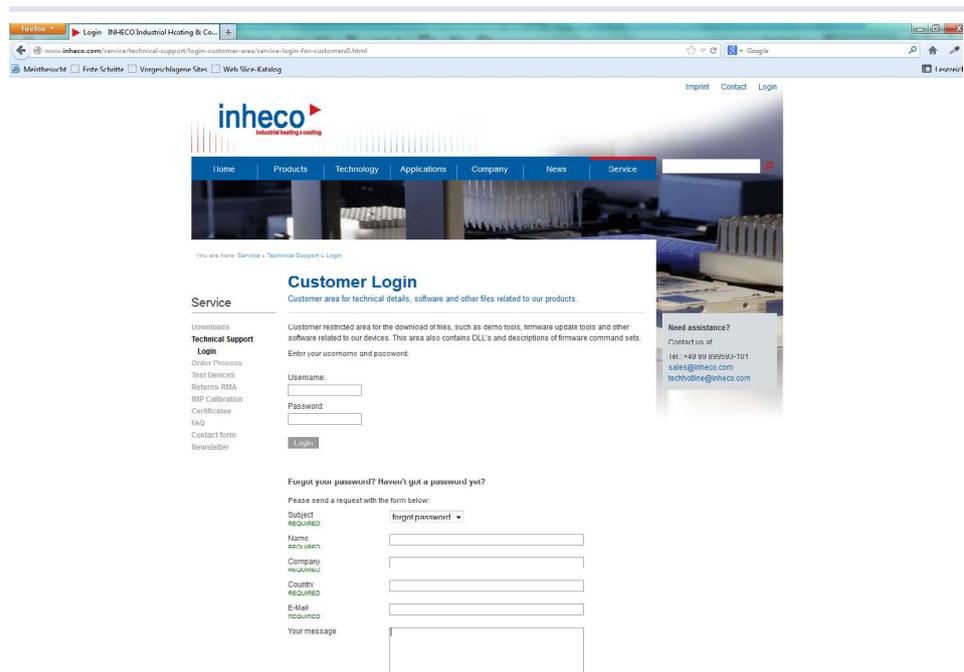


Fig.2: Login page

- Select [forgot password](#) or [need password](#)
- Enter contact information
- Include the serial numbers of the MTC/STCs you wish to update in your request for your customer login in the message section.
- Use [send](#) to submit your request

It may take two working days until you receive the keys from INHECO. The User name and Password will be sent to your email address given in your request.

- After the receipt of your password re-enter the "Customer Login Area"
- Enter your [User name](#) and [Password](#)

3.2. Download and install the MTC/STC Firmware Update Tool

You have now entered the "Login Area" at www.inheco.com

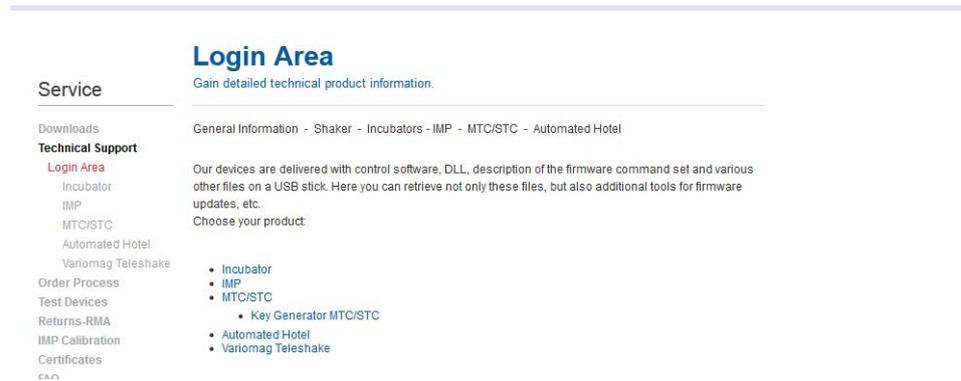


Fig.3: Login Area

- open [MTC/STC Area](#)

You are now on page "INHECO Multi / Single TEC Control".

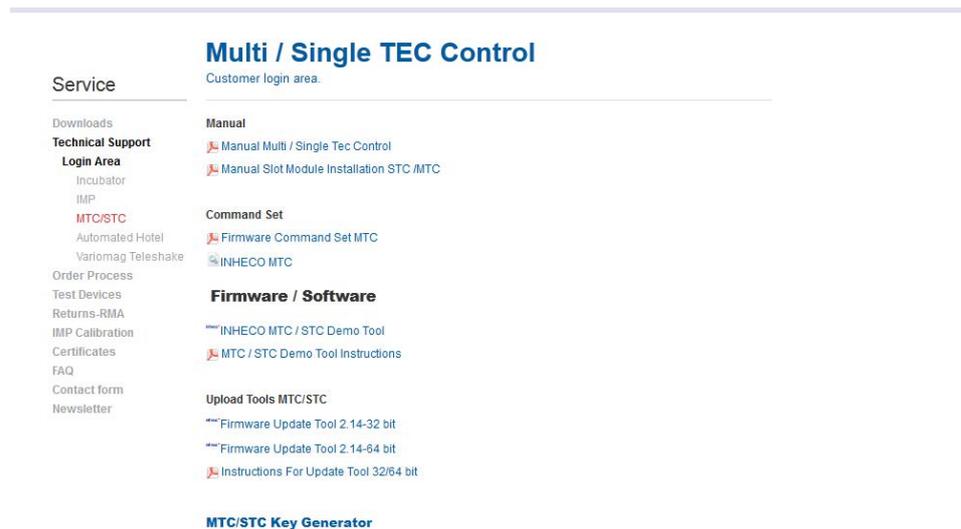


Fig.4: MTC/STC Area

NOTE

The Download starts when you click on "MTC/STC Firmware Update Tool". A Windows message pops up, asking you whether you wish to run or cancel.

- In case you can use this computer for the firmware upload, click on "Run".
- In case you need to use another computer, click on "Cancel" and transfer the downloaded file to the other computer later.

It is also possible that your Windows safety system asks you, whether you really want to download this file. Click on Run.

4 RUN THE UPDATE TOOL

4.1. Get Started

- Double click the installer program "MTC_STCupdate_setup_211.exe".
- Click on "Next" in the welcome window of the installer.

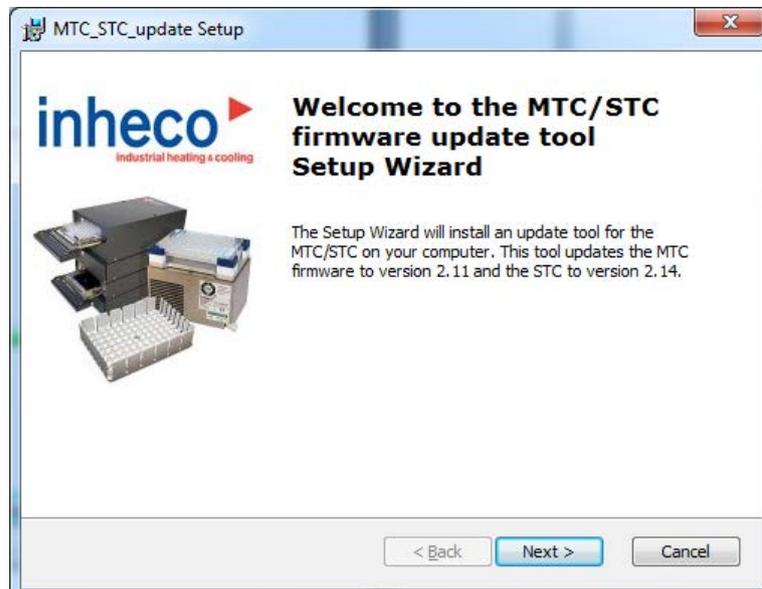


Fig.5: Welcome window

- Click on „Next“.
- Accept the license agreement.
- Select "install folder".
- Select "Install".
- If not already on your PC the tools FLiP from Atmel and the Java Runtime Environment must be installed either.

4.2. Optional Windows installation

The flash upload tool needs Windows driver from Atmel and Java. If your PC does not have the correct driver the following window pops up. Please follow the installation routine.



Fig.6: Atmel installation

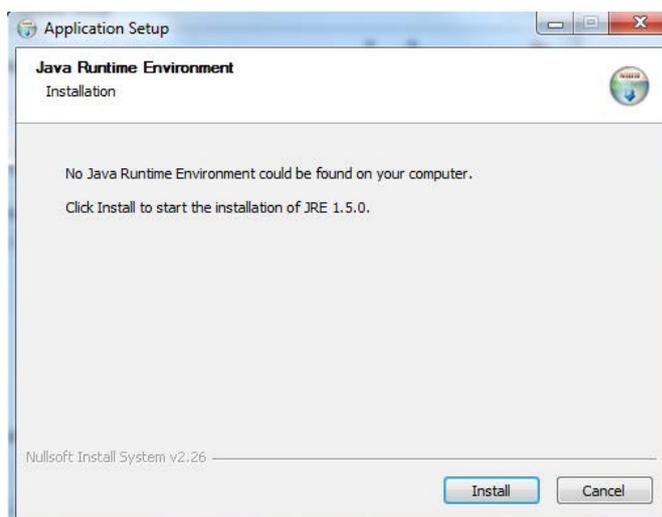


Fig.7: Java installation

Eventually a windows safety message pops up regarding the driver software. Click on "Install" anyway.



Fig.8: Safety warning

4.3. AtLibUsbDfu.dll cannot be found during MTC/STC firmware update?

This is an error from windows.



Fig.9: Atmel dll is missing

During installation some Atmel DLLs are not found. These files must be installed on your PC at a location where Windows can find them. Often the DLLs are uploaded to this location: C:\Program Files (x86)\Atmel\Flip 3.4.2\bin. Windows does not find the DLLs at this location. You can search for the location of the DLLs with Windows explorer.

There are four opportunities to solve the issue:

1. Use a different PC
2. Copy the DLLs of the directory C:\Program Files (x86)\Atmel\Flip 3.4.2\bin into a folder where Windows definitely finds them, e.g. into \Windows\System32\.
3. use a PC with operating system windows 7
4. use the following workaround
 - Install MTC/STC Update Tool
 - Start Atmel USB Driver Bundle
 - if you see the option uninstall Atmel USB Driver Bundle 7.0.888 uninstall the driver and restart your PC and start Atmel USB driver bundle again. You might to repeat this several times!
 - if you DON't see the option uninstall go to next step
 - Install Atmel USB Driver Bundle 7.0.888
 - Start MTC/STC and connect via USB with PC
 - Start MTC/STC Firmware Update
 - If update was not successful disconnect MTC/STC from PC and shut down the MTC/STC
 - uninstall Atmel USB Driver Bundle 7.0.888 restart PC
 - Repeat step (except installation of update tool) until update was successful.

Note: DLLs represent the interface of the chip developer Atmel. Atmel was bought by Mircochip we are currently in contact with this company regarding the compatibility problem with Windows 10. However until we have a solution you need to either use windows 7 or the workaround.

4.4. Detect serial numbers and firmware versions of mainboard and slot modules

If installation of the Update Tool was successful the Tool opens.

NOTE

You will also find a red INHECO triangle icon of this tool on your desktop in case you wish to re-open the tool at any other time. The subtitle of the red triangle icon is MTC_STC_update.

- Connect your MTC/STC
- Switch it on
- Wait until the touch screen of your MTC/STC shows the menu.
- Verify that all software applications are closed on your PC except your upload tool and your internet browser.

NOTE

Any open software applications on your computer can lead to continuous and time consuming upload failures.

- click on the purple field “Find MTC/STC” in the update tool window:



Fig.10: user interface firmware update tool

The serial numbers of the mainboard and of the installed slot modules are now shown in this window, as well as the current firmware version of the mainboard and of each slot module. A column of empty fields for “keys” is also shown. Those keys need to be entered before the update process can be started. You need one key for the mainboard and one key per slot module. The next chapter describes how to get the keys. For safety reasons we did not enable the upload tool to make a direct connection between the internet and the PC which is running your MTC/STC. Therefore you should save a copy or a PDF-File of the serial numbers, or print them out or write them down.

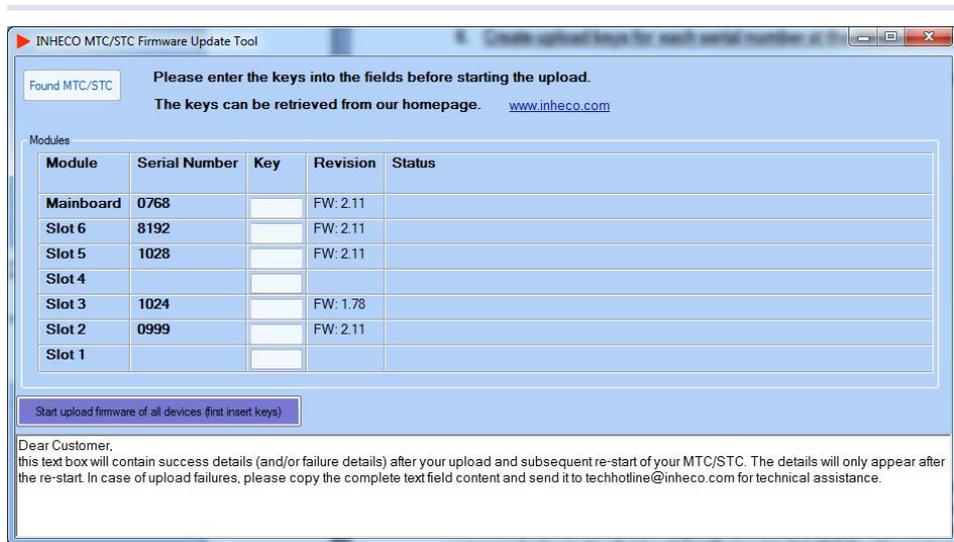


Fig.11: reported serial numbers

- Copy the serial numbers (for update to firmware 2.78 for mainboard only copy the the mainboard serial number) for the key retrieval

How to get the keys for the upload tool?

Service

Downloads

Technical Support

Login Area

Incubator

IMP

MTC/STC

Automated Hotel

Variomag Teleshake

Order Process

Test Devices

Returns-RMA

IMP Calibration

Certificates

FAQ

Contact form

Newsletter

Please find below the serial numbers and the keys of your mainboard (MB) and slot modules (Slot).

Copy and paste the table, print it or save as pdf.

Devices	Serial number	Key
Mainboard	1934	:WINC2
Slot module		

Copy and paste the keys into your upload tool.

Additionally, an e-mail including the keys will be sent to your e-mail address.

Follow instructions of [Manual Upload Tool](#)

Fig.14: reported keys for update tool

- In addition an E-mail which includes the keys will be sent to your E-mail address
- Transfer the keys from the customer Login area or from the E-mail into the MTC/STC Firmware Update Tool using “copy and paste” or simply by typing them in manually. To avoid typing errors we recommend copy and paste.

4.5. Create upload keys

For each serial number a different upload key is necessary and can be created at the "INHECO Customer Login Area".

- go back to "Login Area" within the Technical Support

Service Login Area
Gain detailed technical product information.

Downloads
General Information - Shaker - Incubators - IMP - MTC/STC - Automated Hotel

Technical Support
Login Area
Incubator
IMP
MTC/STC
Automated Hotel
Variomag Teleshake

Order Process
Test Devices
Returns-RMA
IMP Calibration
Certificates
FAQ

Our devices are delivered with control software, DLL, description of the firmware command set and various other files on a USB stick. Here you can retrieve not only these files, but also additional tools for firmware updates, etc. Choose your product.

- Incubator
- IMP
- MTC/STC
- Key Generator MTC/STC

- Automated Hotel
- Variomag Teleshake

Fig.12: Login Area => Key Generator MTC/STC

- open Key Generator MTC/STC

Service INHECO Multi / Single TEC Control
Customer login Area

Downloads
KEY GENERATOR MTC / STC

Technical Support
Login Area
Incubator
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Variomag Teleshake

Order Process
Test Devices
Returns-RMA
IMP Calibration
Certificates
FAQ
Contact form
Newsletter

Please fill out the form with the serial numbers (SN) of your devices, mainboard (MB) and slot modules (Slot). In addition, for easy support, please leave us your name and your email address.

Contact data:

First name:

Last Name:

Company:

E-mail:

City:

Country:

Serial numbers (SN):

Mainboard:

Slot module:

Fig.13: Key Generator

- After completing the form with your data and serial numbers (for update to mainboard version 2.78 only use the Mainboard serial number), click on "submit". The keys are created and shown in a table (see Fig. 14).

4.6. Upload new firmware to the main board and each slot module

The firmware upload will takes approximately 15 minutes per slot module and can take up to 1.5 hours if your MTC is equipped with 6 slot modules.

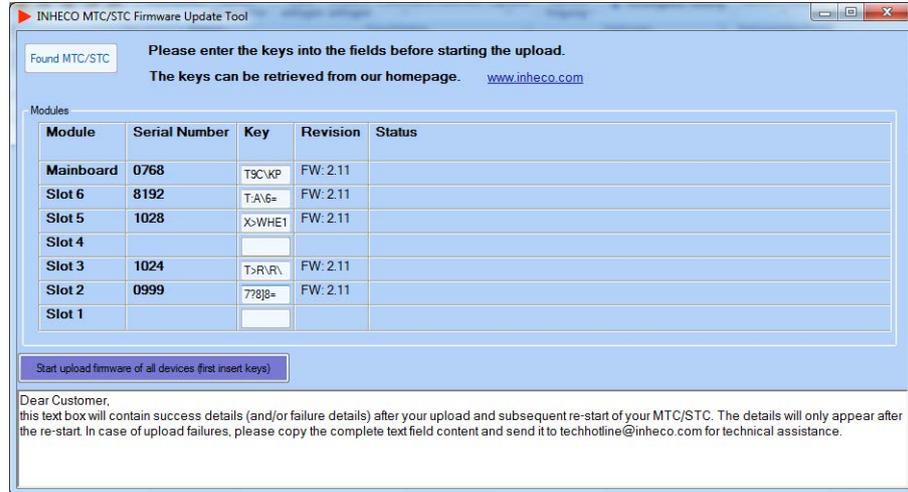


Fig.15: entered keys into update tool (for mainboard update 2.78 only enter key for the mainboard)

- Enter keys (for mainboard update 2.78 only enter the key for the mainboard) & click on “Start upload firmware of all devices (first insert keys)”
- The update starts with the firmware of the mainboard and will then continues with slot 1, slot 2, etc. The upload status of each slot is shown during the upload process.

NOTE

Do not interrupt the update once you have clicked on the purple button [Start upload firmware of all devices](#).

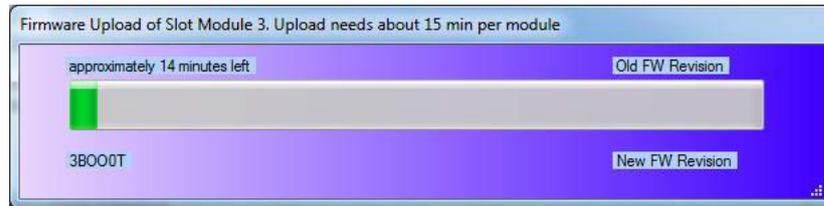
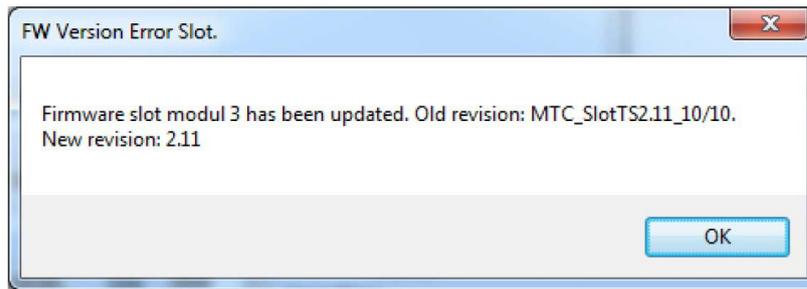


Fig.16: time bar for update

The firmware version of the mainboard and each slot should change to the latest firmware version during the upload, unless some slot modules are already up-to-date.

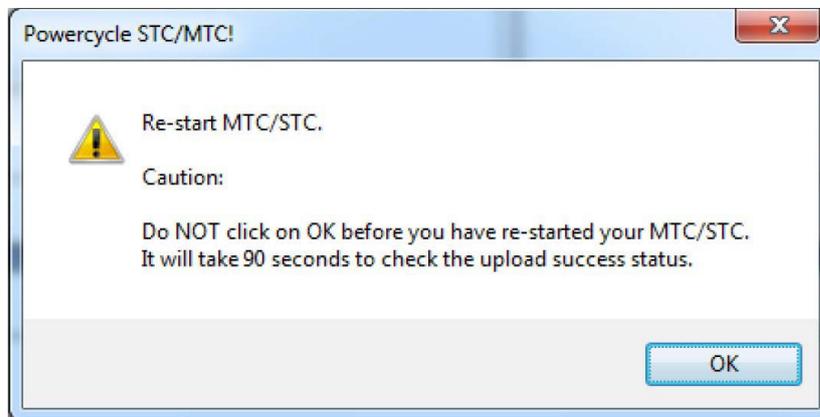
After the update of each slot firmware the following message pops up:



Click OK to continue

In case of failures, follow the instructions of the pop-up-windows.

Once you have finished your upload you will be asked to re-start your MTC/STC. Caution: do NOT click on "OK" of the pop-up-window before you have re-started your MTC/STC.



CAUTION: re-start your MTC/STC first !!!!

After your upload and the re-start of your MTC/STC, the white text field at the bottom of your upload tool will contain detailed success and/or failure messages. Red colored error messages indicate that your upload was partially unsuccessful. In case of upload failures you should retry the upload of the slots with previous upload failures. In case of repeated failures, contact techhotline@inheco.com and email them the complete content of the text field at the bottom of your upload tool for technical assistance.

You are finished with your firmware update and you can close the upload tool if the text field shows the message: "Great, you did it!" and only shows success (ok) messages in black color.

This is it!