

K1Prime firmware version 3.11 EBPro – Release notes

This zipped folder contains the files and instructions to upgrade your K1 Prime fluxer with the current firmware (operating system) version 3.11 EBpro (EBPro HMI and a new motor drive). It is recognizable by the only orange led top left of the screen, compared to the older HMI which had 3 leds or on the boot up of the unit (it should be written EBPro or not). **The previous HMI will not work with this firmware version.**

New features version 3.11/3.11E EBPro

- The rocking motion will try to recover from a slipping error fault.
- Temperature controller initialization improvements.
- Version 3.11E added for the EBPro HMIs with Ethernet capability.

New features version 3.10/3.10E EBPro

- Motor drive hardware V2.3 is now compatible with EBPro HMIs. V1.3 motor drives are now obsolete.
- Improved the “motor communication error” fault detection by adding a filter on the Transmission/Reception (TX/RX) to the motor drive.
- Version 3.10E added for the EBPro HMIs with Ethernet capability.

New features version 3.05 EBPro

- Fix a bug that prevents step #6 to proceed with the next step of the recipe in solution or non-pouring mode under certain circumstances.
- Enhance detection of the mold heater errors.
- Add an error message that will trig if the mold is not installed.
- It is now impossible to start a solution method with the mold heater installed.
- Minor bugs corrected.
- Fix Chinese Font.

New features version 3.04 EBPro

- Fix a bug that allowed the pouring to be done earlier than it should be under certain circumstances.
- Fix the pouring angle that was not supposed to exceed 120 Degrees.

New features version 3.01 EBPro

- Minor bugs corrected.
- Motor speed adjustment which is critical for the pouring under certain circumstances.

New features version 3.00 EBPro

- Minor bugs corrected.
- Motor Drive and HMI have been changed due to obsolete parts. It makes the system more stable and faster to respond.
- Whole system reprogrammed to adapt the new hardware.

New feature version 2.33 and 2.33-Asia

- Minor bugs corrected. Minor temperature variation with the ramping parameter. It is now fully accurate.
- 15°C/m and 25°C/m added as ramping range.

New feature version 2.32 and 2.32-Asia

- German language added to the language selection in V2.32.
- Indonesian language added to the language selection in V2.32-Asia. Asia version has English, French, Indonesian, Russian, and Chinese.
- A manual control of the temperature has been added to the special window 2206. Using the password 2206, the crucible or mold temperature can be adjusted to the desired values. The temperature will be reset by leaving the special window 2206.
- A new special window has been created. Using the password 2207, the special window will appear and show the status of the rocking sensor.
- Minor bugs corrected.

New feature version 2.30

- New algorithm to control the temperature of crucible heater when using Black Ceramic Cylinder to protect the element. Version 2.30 or higher must be used when using Black Ceramic Cylinder. This new algorithm is also efficient when using sapphire cylinder protection. In both cases, the version 2.30 helps to maximize the performance of the crucible heater.

New features version 2.25

- Italian language added to the language selection.
- Portuguese language added to the language selection.
- Intermittent pouring bug corrected.
- Furnaces safety relay is disabled during startup. Motor controller firmware is updated to allow that.

New features version 2.23

- Chinese language added to the language selection.

New features version 2.22

- Bug with slow mold heating corrected.

New features version 2.21

- Russian language added to the language selection.
- Spanish language added to the language selection.
- The loop operation can be activated for testing purpose of the unit (repetitive test after adjustment or maintenance). This will repeat forever the same recipe once the start button is pressed. By pressing the Stop button the method will be stopped and the loop operation parameter reseted. This parameter can be turned from a single interface window with special access passcode "2206". **Do not produce sample when setting this parameter to ON.** The end beep buzzer should be adjusted to 5 seconds for the loop operation to work properly.
- Table to select method (fusion program/recipe). This is faster and allows you to see all methods on one table.

New features version 2.01

- Time bar that shows evolution of fusion on the graphic.
- Detection of many execution errors (communication problems, temperature not increasing, over-temperature ...). The system shows a pop-up window with a short description of the error. This will be helpful to find and resolve quickly such issues.

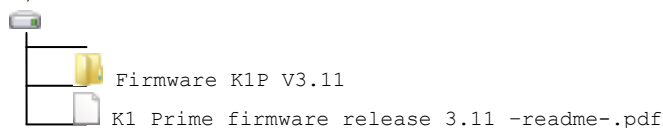
Apply the upgrade to your instrument

If upgrading from version 2.01 or later, it is not necessary to update history files, so all your recipes will remain unchanged.

If your firmware version is older than 2.01, you will need to update the "history files"; **this will erase all methods/programs stored on the fluxer**. So, if you want to re-create them afterwards, you will need to take them in note *before* you do the upgrade.

1. Extract (unzip) the compressed folder file directly onto a USB drive "letter" (i.e. root directory).
2. The structure of your drive should look like this :

```
USB drive  
root directory  
(e.g. "E:\", "F:\" ...)
```



3. Insert the USB drive into the K1 Prime. The hole to insert the USB memory is located at the bottom left of HMI (human machine interface).
4. A dialog will automatically pop up, after a few seconds.
5. Touch "Download".
6. A dialog will appear, requesting a password and what data to download. The password is "111111" (six times the digit one). You may have to drag the dialog window to the left, to show the keyboard and then type the password.
7. Select "Download Project Files" to upgrade the firmware.
8. "Download History Files" option:
 - a. If upgrading from **version 2.01 or later**, it is not necessary to update the "history files", so all your recipes will remain unchanged. **Uncheck** the "Download history files" option to keep your custom programs.
 - b. If your current firmware version is **older than 2.01**, you will unfortunately need to update the "history files"; **this will erase all methods/programs** stored on the fluxer. So, if you want to re-create them afterwards, you will need to write them down on paper before you do the upgrade. You need to **leave the checkmark** on the "Download history files" option to accept the overwrite/upgrade.
9. Touch "OK".
10. Now, choose where you want the data to be fetched. By default, you will have to double-click on "USBDISK", then double-click on its sub-directory, named "disk_a_1", then highlight the folder named "Firmware K1P V3.11".
11. Click "OK" to start the transfer to the USB drive. The screen will black out, and the fluxer will re-boot.
12. Note that there could be strange messages on the screen (like "Overheating", even if the furnace is at room temperature). Just press OK to continue if that is the case.
13. During the first boot-up, the firmware motor upgrade takes about 1 minute to be performed. Do not interrupt it. Do not turn OFF the instrument until you have reached the main screen (where you can execute fusion method).
14. The new firmware or programs are loaded, and you can remove the USB drive.