

## X-100 firmware version 2.02

This zipped folder contains the files and instructions to upgrade your X-100 fluxer with the current firmware (operating system) version 2.02.

**Please carefully read all sections between your current firmware version and this one.** Specific adjustments may be needed, while others may not be available on your fluxer.

The current firmware version can be found on the startup- screen during boot-up and in the global parameters screen.

### New features version 2.02

- **Motors Synchronization:** Optimization aimed at reducing the oven door opening time.

### New features version 2.01

- **Motor Position:** Optimization to obtain a more accurate and repeatable positioning of all motors.

### New features version 2.00

- **Sample Traceability:** Activated enhanced Sample Traceability features.
- **Bug Fix:** Addressed intermittent issue where the security door failed to unlock immediately after cycle completion.
- **Serviceability:** Reviewed and improved the Voltages Service Window to streamline heating issue diagnostics.
- **Hardware Flexibility:** Implemented intelligent code to support an optional, added Furnace Door Closed Sensor. The system automatically adapts its logic based on the sensor's presence, ensuring proper door closure detection.

### New features version 1.21

- Door and sliding Motor boards firmware updated to version 1.21. Adjustment made to use higher current to operate with different motor size.
- Global motion optimization and correction of minor glitches.

### New features version 1.20

- Door and sliding Motor boards firmware updated to version 1.20. Adjustment made to use additional wiring to synchronize sliding and door motion. Faster global motion is now allowed with this correction.
- PID parameters are optimized for more accurate temperature control. It requires history files to be updated.
- Cycle control output of temperature controller has been modified from 2 to 1 seconds. It allows a more fluid control of the temperature. Parameter #7 added to the heater screen. Temperature controller parameters are now version 1.20 and are automatically updated when upgrading to firmware 1.20

### New features version 1.14

- Door Motor board firmware updated. Door board is now version 1.08 Adjustments made on timing activation of relays to measure voltages to prevent intermittent issues with encoder feedback.

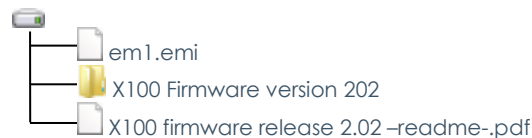
## New features version 1.12

- Motor boards firmware updated. Rocking board is version 1.05. Door and Sliding boards are now version 1.07. Adjustments made on timing activation of relays to measure voltages to prevent intermittent issues with encoder feedback.
- Variable added to control the voltages measured during the process. Set by default to full scan.
- Step timer intermittent initialization issue resolved.
- Motion issue counter has been updated to resolve intermittent issues.

## Apply the upgrade to your instrument

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. Make sure that your X-100 is not running a fusion. In such case, wait for the fusion to complete or press STOP button twice to abort it.
4. Select method TEST to make sure no heating is occurring during the update.
5. Insert the USB drive into the X-100. The hole to insert the USB memory is located at the bottom left of HMI (human machine interface).
6. A dialog will automatically pop up, after a few seconds.
7. Touch "Download".
8. 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.
9. Select "Download Project Files" to upgrade the firmware.
10. **Unselect** "Download History Files" to **do not** update **the fusion recipes**
11. Touch "OK" to confirm.
12. 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 "X100 Firmware version 202".
13. Click "OK" to start the transfer to the USB drive. The screen will black out, and the fluxer will re-boot.
14. During the first boot-up, the firmware motor upgrade takes about 5 minutes 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).
15. The new firmware is loaded, and you can remove the USB drive.