

## BioFlo® 320 Update – Version 04.07

### Description of changes:

Software revision 04.07 incorporates the following solutions/additions to improve the performance of your bioprocess controller:

- > Added 2-Point calibration for variable speed pumps
- > Updated the keyboard to add additional characters.
- > Increased Combined Total/Max Flow limits when using Low Flow Multi 1SLPM TMFC Drawers in Gas Mix and Manual Modes.
  - 4 Gas Mix, 3 Gas Mix, 4 Gas Manual, 3 Gas Manual – 3 SLPM
  - O2 Gas Mix, 2 Gas Manual – 2 SLPM
  - N2 Gas Mix, 1 Gas Manual – 1 SLPM (No Change)
- > Various Minor Bugs

**NOTE:** For multiple BioFlo 320 installations, please ensure to update the software for Unit 1 before updating the software for units 2-8. This will ensure that software changes are visible on the user interface as they are made for units 2-8. For the update of any unit, the USB drive remains inserted in the USB port of unit 1.

### Instructions:

Determine which software version is currently installed in your computer:

- > Turn on your fermentor/bioreactor
- > Select the Setup button(Unit View) from the bottom
- > Select the Software Tab
- > View the software version

If the installed software is lower than the latest version listed above, perform the upgrade as listed below. You may want to print this page for easy access to the instructions while you work.

1. Note - Some recipes may not be compatible with the system after firmware upgrades; we recommend manually recording all recipe values prior to upgrading your firmware, as well as backing them up on an external USB memory stick before performing the upgrade
2. Note - For multiple BioFlo 320 installations, please ensure to update the software for unit 1 before updating the software for units 2-8; this will ensure that software changes are visible on the user interface as they are made for units 2-8. For the update of any unit, the USB drive remains inserted in the USB port of unit 1.
3. Extract the downloaded .ZIP file to your hard drive (suggest "desktop")
4. Install a USB external memory device into the computer's USB drive connection
5. Go to the Extracted .EXE file with in extracted file on your hard drive and double click the file
6. Pop up menu comes up – Select Run
7. From the pop up menu - under "Unzip to folder" – click "Browse" and select USB drive (Removable Disk)
8. Select Unzip button and Okay
9. After download is complete select "Close" to close the dialog box
10. Remove the USB external memory device from the computer and insert it into your fermentor/bioreactor USB port on the back of the unit

11. On your fermentor/bioreactor, select the Unit View – Setup screen
12. Select the 'Software' tab
13. Select the 'Refresh' button located in the 'Software' panel
14. In the 'Updates' list, select the file (\Update\_R320GUI\_04070011) to be installed
15. Select the 'Update' button and the update routine will begin
16. During this update routine, a few dialog boxes (sometimes error messages) will pop up
17. Select "Yes" to all and the unit will automatically restart a few times
18. After the update is complete – you will come to the main screen
19. Select the Unit View – Setup screen and go to the "System" tab
20. Select "Checkmark" button - This will bring back your original loops settings and control
21. Verify that the new version is running by selecting the 'Setup' button and then the 'SystemSettings' tab. Under "Software" confirm you have "Revision 04.07"
22. The unit will now be running with the new version that was installed on it
23. In case multiple units are connected and controlled from the same touchscreen monitor (units 2-8), proceed one by one with the other connected units:
  - a. Select the group view button, and select unit 2.
  - b. Select the unit view button and repeat steps 14-25
  - c. On units 2-8, the reboot takes place after a few seconds. On the touchscreen, a message will appear "Lost communication with unit 2".
  - d. Only when the message "Communication established with unit 2" appears, the firmware update is complete. This may take several minutes.
  - e. After unit 2 is completed, proceed to unit 3 (etc.)
24. The USB external memory device can be removed from the unit

Congratulations! You have installed the latest performance enhancements.