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## **TVS – Temperature Validation Software instructions**

### **Connecting to your PC to the Fluidized Bath**

- 1) Plug your USB to RS485 interface into the computer and the drivers will install automatically. Connect the serial cable between the interface and control box of the Fluidized Bath. Go into Device Manager to determine the coms port number that was assigned.
- 2) Launch TVS software and click on "File", "Open unit 1". On the left side of the screen select the serial port that your PC has assigned to the interface.
- 3) Click "Start Device". The software should connect to the Fluidized Bath and start scanning for the actual readings and set point which will show in the Unit 1 interface window. From this window you can click on "SET" to change the bath set point temperature.
- 4) Note that AccuTherm FTB operates in either degrees C or F depending on how the controller is setup. There is no option with TVS to change from C or F as it will follow how your controller is operating.
- 5) The "Graph" button will allow you to monitor the setpoint and actual bath temperature over time. Scaling is set by the options at the top of the screen

### **Using the "Timer" and "Park now" options**

- 1) Click the "Timer" button to set a daily and/or weekly running schedule for the Fluidized Temperature Bath.
- 2) The current day block will turn green. In the "temp" box enter the required bath operating temperature. When the "on" time is reached the Fluidized Bath will ramp up to the "temp" value. Set the "off" time for when the bath will not be in use, which we call the parking temperature.
- 3) You can set a park temperature of ambient to 200C/392F using the slider bar below "Parking Temperature". This is set to degrees C and cannot be changed. When the "off" time is reached the bath will cool down and hold the Parking temperature until the next "Enabled" day and "on" time.
- 4) During the off time we recommend placing the lid on the bath.
- 5) Check the box next to "Auto-Start AccuThermFTB" if you want the software to automatically launch and run if the PC is restarted for some reason.
- 6) After all settings are made, click the "Save and Apply Settings" button.
- 7) During any running cycle you can change the setpoint at any time by first clicking on the "Park Now" button or by unchecking the "Enabled" button on the current day and then click on the "Interface" tab to change the "Set" value. Note that that program will follow the timer weekly schedule and override any temporary setpoint changes once the on and off set times are reached.

### **Instructions for using the Temperature "Validation Log"**

- 1) Click settings to set up your "Company Details" along with adding your "company logo". Once set this will be retained by the software.
- 2) Launch "Edit Profiles" to create your test temperature validation profiles using the criteria shown. During the actual run if any logged readings are outside of your max and min values set here the real time display will show these readings in RED and the report will show them in ITALICS. Note that the "Temperature" value is not the Fluidized Bath set point and will not change the bath temperature. This can be done manually or from the "Interface" screen using the "Set" button.
- 3) The TVS software will only capture 40 lines of readings so take this into account when you set your "Heat Time" and "Log Interval".
- 4) Click the "Log" button to launch the real time data screen. Now click "Validation Test" to enter the particulars for the heat treatment or test you are about to perform. This information will be included on the final report for this validation log. Select your "Profile" from drop down menu which was created in step 2.
- 5) Once all required fields are completed prepare your sample for heat treatment or test and lower it into the Fluidized Temperature Bath. Click the green play/start button to start recording the Fluidized Temperature Bath readings.
- 6) You can click on and drag the "Validation Log Unit 1" window out of the way if you choose to.
- 7) The green text boxes at the bottom of the real time logging screen will show the actual time and time remaining in sample interval.
- 8) Once the profile "Heat Time" has been reached a message will pop up as a reminder to remove your sample or product from the Fluidized Bath. Click on the RED stop button on the "Validation Log Unit 1" window to end the run.
- 9) Click on the "Report 1" tab at the top of the screen to see your results which can be printed or saved as a PDF.
- 10) To heat treat another sample click on the "Bath 1" tab and go back to step 4 entering the particulars for the new run. The data in the previous report will be over-written and a new one started.

If you require software validation on TVS to meet your quality standards or FDA requirements please let us know.