ReadMe FluentControl 3.3

Introduction

This document contains important information about FluentControl 3.3. Please read it carefully before installing or upgrading the software.

Important info for systems with RGA upgrading from FluentControl 2.8 or older to FluentControl 3.3

After upgrading from FluentControl 2.8 or older to FluentControl 3.3, the Gripper Alignment QC Setup Action needs to be re-executed in FluentSetup. A Tecan Field Service Engineer must be on site to perform this test.

When upgrading from FluentControl 3.0 or higher to FluentControl 3.3, execution of the Gripper Alignment QC Setup Action is not required.

Important info for Connect & Introspect users upgrading from FluentControl 2.6

If the IoT Client was used to send live status updates to the Tecan Connect app or to send meta-data to Introspect, special steps are necessary before installation of FluentControl 3.3 to ensure that data is still sent from the Fluent PC. Please follow the step-by-step instructions on page 3.

1. Installation and Upgrades

Considerations before installation or upgrade

Operating system
FluentControl 3.3 is compatible with Windows 10 Enterprise LTSC 2019 (1809) and Windows 10 Enterprise LTSC 2021. The IOT versions of these LTSC releases can also be used. Tecan cannot support issues arising from running FluentControl on an incompatible operating system.

FluentControl uses Windows components, especially the .NET library. Please install the current .NET security and quality updates to prevent a negative impact on FluentControl.

Computer requirements
The Minimum requirements to run FluentControl can be found in Chapter 4.1 Computer Requirements of the FluentControl 3.3 Manual. To guarantee a good performance, Tecan recommends using an Intel processor (CPU) of the 10th generation or higher. Using a CPU of a lower generation is also possible, but performance should be verified on a case-by-case basis.

DeckCheck
Since early 2022, all Fluent instruments have DeckCheck camera(s) integrated in the chassis. DeckCheck commands may be integrated in methods to check prior to a run that the worktable has been set up correctly. DeckCheck must not be used, the feature can be disabled Configure System.

The DeckCheck image comparison algorithm requires the following computer hardware (see also the computer requirements in chapter 4.1 of the FluentControl Manual):
- Use an Intel® Core™ i7 10th generation (Comet Lake) processor with UHD 630, or higher. For example, an i9 or higher generation i7 can be used
- Do not use a processor without integrated graphics (Intel UHD Graphics), except when also using an NVIDIA RTX 2060, NVIDIA RTX 2080 or NVIDIA PP2200 Quadro graphics card
- Do not use a separate graphics card for a DeckCheck configuration, except the NVIDIA RTX 2060, NVIDIA RTX 2080 or the NVIDIA PP2200 Quadro
- DeckCheck does not work when using a separate graphics card not listed above

User Administration Settings
In rare cases, the Login Settings and Password Settings in Settings > User Administration (Lock Time, Minimum password length, etc.) are reset to defaults during the upgrade. If the User Administration is used and settings have been customized, please note down or take a screenshot of those settings before upgrading.

DriverFramework & 3rd party drivers
FluentControl 3.3 is only compatible with DriverFramework 3.1.12 or higher. If DriverFramework 3.1.11 or lower is used, the License Manager will not find a valid license and FluentControl and its sub-drivers are in simulation mode (see DriverManager, show hidden drivers).

Upgrade the DriverFramework before upgrading FluentControl. Upgrade the DriverFramework as follows
1. Upgrade within the same DriverFramework series (e.g., 3.1.2 to 3.1.12): run the latest DriverFramework installer
2. Upgrade between series (e.g., 2.4 to 3.1.12):

a. Do not run the installer
b. Backup the file "C:\ProgramData\Tecan\DriverFramework\SystemConfig.ini" which contains all driver settings of the current installation
c. Un-Install the previous DriverFramework and remove the above file from the folder (keep your backup)
d. Install the new DriverFramework
e. Add each driver with the same name as before the upgrade
f. Consult the backup SystemConfig.ini for names and parameters
3. DriverFramework 3.1.12 or higher no longer allow the use of the dot (.) character in the driver module name. If drivers with such naming are present, uninstall the driver from FluentControl before upgrading. After upgrading, add the driver back without the dot (.) in the name and update any scripts accordingly.

Note that the current version of the DriverFramework only allows the use of drivers for which a license has been purchased. For questions about DriverFramework driver licenses, please contact your local helpdesk.

FluentControl must always be started before launching the DriverFramework, otherwise the driver license check will fail.

Before upgrading, make sure that the latest versions of any 3rd party device drivers are installed.

Restore Points
Reverting to a restore point is not possible, if the restore point was created before an upgrade to FC 3.3.

Upgrading procedure

When upgrading from FluentControl 2.2 or lower, uninstall FluentControl and run the FluentControl 3.3 installer. When upgrading from FluentControl 2.3 or higher, please upgrade in place as described below. Do not uninstall and reinstall FluentControl.

FluentControl 3.3 executes a database cleanup step as part of the upgrade process. This step ensures faster .zeia file import and export actions. The database cleanup process may take some time.

For an upgrade from FluentControl 2.6 with Introspect and / or the Tecan Connect app, consult the instructions below.

Logfiles of the upgrade process may be created by running the autorun.exe through MSIEXEC from the command line:

```
msiexec /i "D:\FluentControlMasterCD\AutoPlay\Install\Tecan
FluentControl.msi" /L*VX "C:\Fluent_install.log"
```

Change the paths in italics as needed.

To upgrade FluentControl, follow these steps and reboot the computer whenever prompted to do so:

1. Close FluentControl
2. Execute the autorun.exe
3. Execute installation steps in the following order:

Step 1: Pre-Installation
Step 2: Install FluentControl
Step 3: Post-Installation
(optional) Step 4: Install Sample Tracking

4. Install the DisplayLink driver for the touch monitor from the 'Touch Screen Driver' folder. Please consult the ReadMe for the DisplayLink driver first.

Upgrade from FluentControl 2.6 with Introspect

Does not apply to upgrades from FluentControl 2.6 not using Introspect or the Tecan Connect app.

 INTROSPECT INTROSPECT

<u>Important info for Connect & Introspect users upgrading from FluentControl 2.6</u>

If the IoT Client was used to send live status to the Tecan Connect app or to send meta-data to Introspect, special steps are necessary before installation of FluentControl 3.3 to ensure that data is still sent from the Fluent PC.

If the IoT client was not registered (red icon), please follow the instructions in the section 'Regular Upgrades' on the previous page

The information described here only applies for upgrades from FluentControl 2.6 and only when the IoT Client was registered (green icon 'Tecan IoT client' in the Windows control bar).

1. Run FluentControl 3.3 autorun.exe

2. Select Step 1: Pre-Installation

3. Reboot the computer

4. Open 'Add or remove programs' from Windows Settings

5. Uninstall the IoT Client Bundle and Tecan FluentControl Preinstaller

6. Run FluentControl 3.3 autorun.exe

7. Select Step 1: Pre-Installation

8. Continue with regular FluentControl upgrade as described in this ReadMe and make sure to re-register the IoT client again after upgrading.

<u>Note</u>:
After registering the instrument, the IoT Client parses all existing log files (again). To avoid the risk of duplicate data and to benefit from the latest parsers it is recommended to delete the data of the instrument in the Introspect Cloud Platform for the time span covering the available log files.

<u>After the Upgrade</u>

Open FluentControl and accept importing the updated labware definitions. This process may take some time to complete.

A Tecan Field Service Engineer must open FluentSetup to:
1. "Apply to instrument" to update template
2. Download new Firmware
3. Initialize
4. Make sure all service items are checked as complete
5. Backup config
6. Create restore point for complete data set

If activated, open User Administration and verify that the login and password settings are correct. If necessary, revert to the previous custom values.

Please check any scripts, processes and methods for validity and execute test runs.

3D Simulator instrument configuration

It is strongly recommended after installing FluentControl that the instrument's configuration is selected in Settings > Configure System > Instrument configuration. The instrument's configuration name is based on the serial number of the connected instrument:

If working with the 3D Simulator to develop methods for a specific instrument that is not connected to that PC, the instrument's configuration can be used. Copy the .config file C:\ProgramData\Tecan\VisionX\InstrumentConfigurations from the Fluent PC to the same folder on the PC not connected to the Fluent. Launch FluentControl and select the configuration in Settings > Configure System > Instrument configuration.

Registering the IoT client

Information on how to register the IoT Client can be found in the Application Software Manual Introspect, which can be found on the Introspect webpage after log in.

The Tecan Connect app can be downloaded from the App Store and Google Play Store for Apple and Android devices respectively.

2. Changes in FluentControl 3.3

The following changes have been made in FluentControl 3.3

- Windows 10 Enterprise LTSC 2019 (1809) and Windows 10 Enterprise LTSC 2021 (version 21H2) compatibility
- Software support for new MCA96 arm
- MCA384 Get Tips and MCA384 Drop Tips commands have been renamed to MCA384 Pick Up Tips and MCA384 Set Tips Back
- New MCA384 Get Tips and MCA384 Drop Tips commands
- New MCA Transfer Liquid smart command for MCA384 with EVA adapter
- New Te-Chrom smart command
- Software support for new MultiSense board for AirFCA
- Software support for new Phase Separator
- Delay command only available for MicroScript
- Removed possibility to run a repair installation
- FluentSetup: new firmware TeMotion I V1.10, TeMotion II V3.1.2 and UniBootloader II V1.3.1
- IoT Client 2.6 integration
- User Management System (UMS) version 1.1.13 integration

See Revision History FluentControl 3.3 for a complete list of bug fixes and changes. See FluentControl Manual for more information on software functions.

New MCA96 arm

The new MCA96 has an extended volume range from 1µl to 1000µl with liquid level detection capability at each tip.

The MCA96 and the FCA use identical disposable tips with the same part numbers. However, for correct tip pickup, the arms require unique settings in the tip labware definitions. In FluentControl, distinct disposable tip labware must be placed on the virtual worktable for each of the arm types. It is therefore not possible for both arms to use the same tip box on the worktable. The MCA96 disposable tip labware can be found in the Labware > MCA96 DiTi section of the Controlbar, and the FCA disposable tip labware can be found in the Labware > FCA DiTi section.

MCA384 Get Tips and MCA384 Drop Tips commands renamed, new MCA384 Get Tips and MCA384 Drop Tips commands

The MCA384 Get Tips and MCA384 Drop Tips commands have been renamed to MCA384 Pick Up Tips and MCA384 Set Tips Back to align with the behavior of the equivalent FCA commands. The Pick Up Tips / Set Tips Back commands can be used to define from which labware specific tips are to be mounted or where they are to be dropped again. When the Get Tips command is used, FluentControl automatically determines where the next available tips are. If not enough columns or rows of tips are available in one tip box and additional tip boxes with sufficient tips are present on the worktable, the MCA384 Get Tips command automatically executes re-racking of the tips so that the required number of columns or rows can be mounted. New MCA384 Get Tips and MCA384 Drop Tips commands have been added to the software.
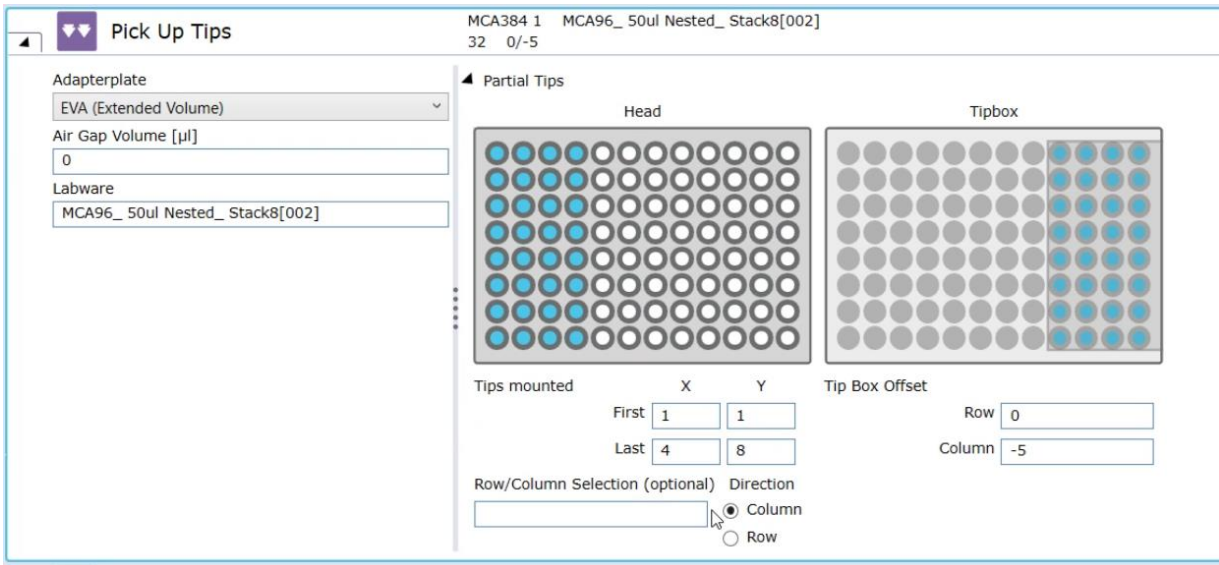
After an upgrade to FluentControl 3.3, any MCA384 Get Tips and MCA384 Drop Tips in existing scripts, processes or methods will be automatically renamed to MCA384 Pick Up Tips and MCA384 Set Tips Back respectively. No manual changes to scripts, processes or methods are needed.

When importing a script, process or method created in FluentControl 3.2 or lower which uses the MCA384 Get Tips and MCA384 Drop Tips commands into FluentControl 3.3, the commands will be automatically renamed to MCA384 Pick Up Tips and MCA384 Set Tips Back respectively. No manual changes to scripts, processes or methods are needed.

MCA Transfer Liquid smart command

A new Smart Command for the MCA384 head with the EVA adapter plate called "MCA Liquid Transfer" is available in FluentControl 3.3. It can transfer liquid from a trough to a plate, copy from one plate to another plate or from a plate to a trough. It incorporates the new MCA384 Get Tips command that automatically determines where the next available tips are and performs a re-racking prior to taking up tips if not enough columns or rows of tips are available in the box for the pipetting step. With the internal DiTi counter and the "On Empty Tray" command, automatic and on-the-fly exchange of empty boxes can be programmed. The MCA Transfer Liquid command includes options to activate mixing before and/or after the liquid transfer, alternatively a tip touch option, which all will be transferred into the Liquid class and handled there. The disposable tips will be either discarded in the end or alternatively there is an option to keep the tips mounted if tips shall be re-used.
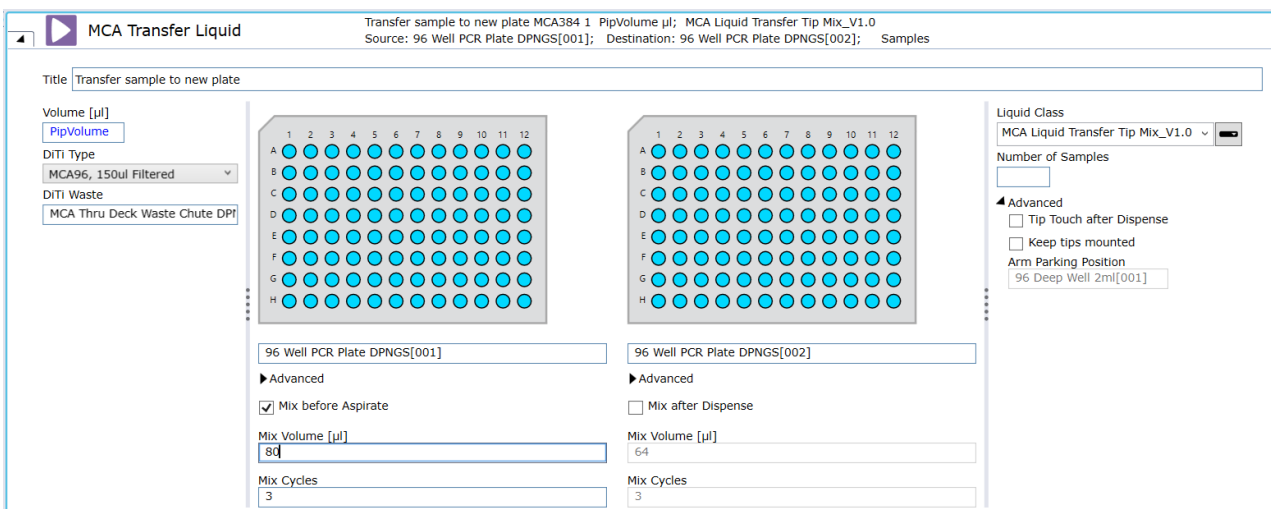
The MCA Transfer Liquid can only be used with the MCA384 and the EVA adapter plate. The command cannot be used with the MCA96 arm.

Te-Chrom smart command

A new Smart Command for the Te-Chrom application is available in FluentControl 3.3. It is specifically designed for the use with the Te-Chrom module and requires appropriate drivers. The command incorporates functionality to do the pipetting, the plate handling, the Te-Shuttle movement, the waste pump activation, and the waste tray handling, thus offering increased efficiency to build chromatography workflows. At the same time, it offers high flexibility with the ability to parametrize most inputs and the ability to choose between units for volume, flowrate and fractionation in order to account for different user needs.
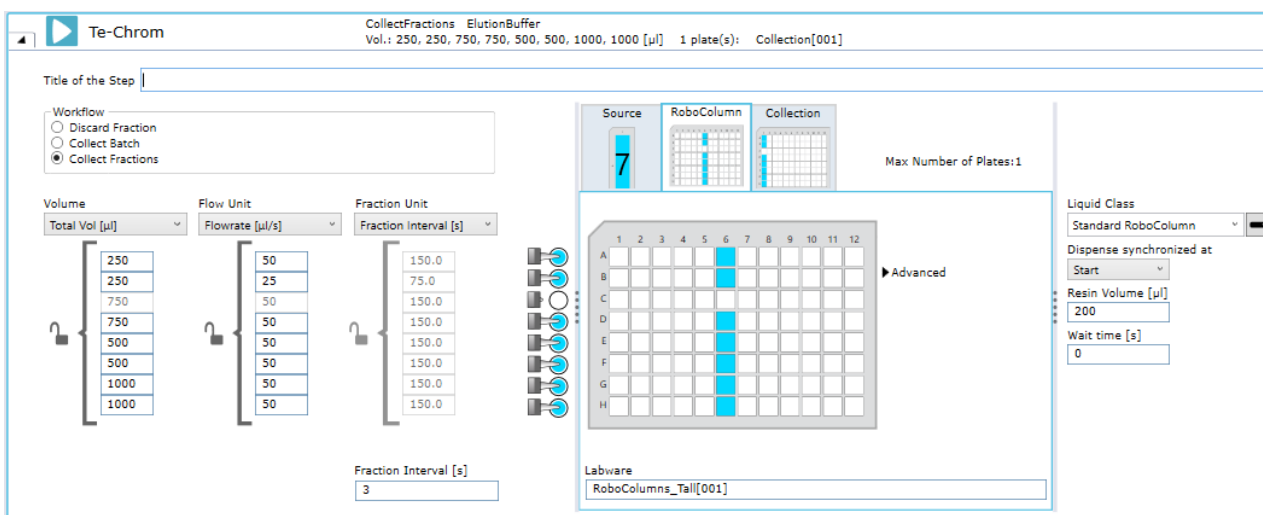

Please refer to the FluentControl manual for more information on the software implementation. The Te-Chrom user guide, available upon request via the local helpdesk, contains additional information about installation and setup.

**Software support for new MultiSense board for FCA**

To enable the Pressure Monitored Pipetting AI (PMP AI) and the Phase Separator features, a new hardware module on the FCA called MultiSense is supported by FluentControl 3.3. The liquid handling performance of FCAs with and without a MultiSense board is identical.

In the liquid class section Detection & Positioning, a new cLLD Sensitivity Group setting called 'MultiSense' has been added. MultiSense arms do not require the cLLD Senstivity Group to be set to 'Low', 'Medium', or 'High' – the setting 'MultiSense' is used for all liquids. The Detect button to automatically detect the cLLD Sensitivity Group is greyed out.
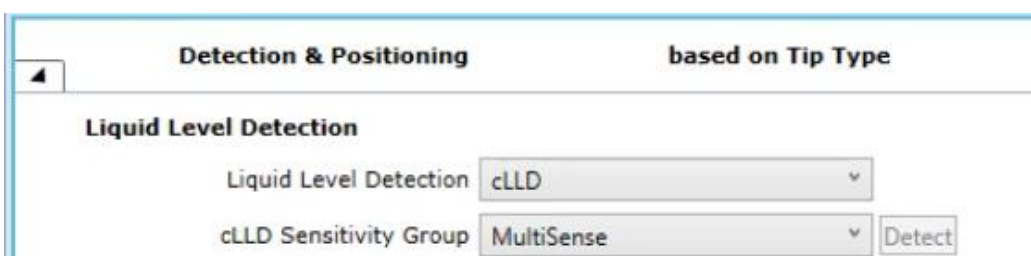

Existing liquid classes do not require any adaptation when they are used on an instrument with a MultiSense FCA. FluentControl automatically detects the arm type and uses the 'MultiSense' setting for the cLLD Sensitivity Group in the liquid class, ignoring any 'Low', 'Medium', or 'High' setting. A yellow

symbol and a tool tip text are displayed when the liquid class is viewed. No manual modifications of the liquid classes are needed.
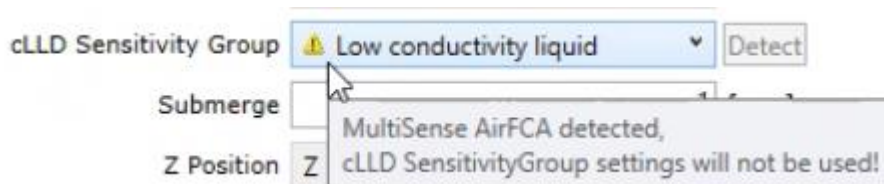
If the cLLD Sensitivity Group is set to 'MultiSense' and that liquid class is used on an instrument without a MultiSense FCA, a context check error is displayed at edit time. The cLLD Sensitivity Group must be set to 'Low', 'Medium', or 'High' for a non-MultiSense FCA.
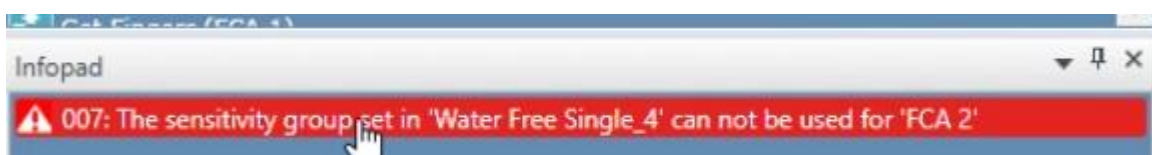
If an instrument has both a MultiSense and non-MultiSense arm installed, the cLLD Sensitivity Group must be set to 'Low', 'Medium', or 'High' for the non-MultiSense FCA. The software will automatically use the 'MultiSense' sensitivity for the MultiSense FCA.
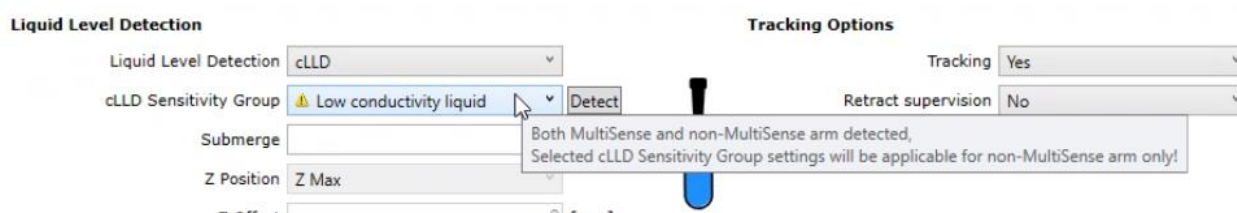
Liquid classes created in FluentControl 3.3 cannot be used in FluentControl 3.2 or lower.

Phase Separator

The Phase Separator is a new feature in FluentControl 3.3 that enables detection of liquid-liquid interfaces based on differences in liquid viscosities, enabling the subsequent separation of the liquid(s) of interest. The functionality requires a new AirFCA with a MultiSense board and needs a dedicated software license (30042066) to use. The feature is available as early-access for those doing plasma separation e.g. for liquid biopsy or pre-natal testing or for biobanks interested in separating serum/plasma and buffy coat. For more information about using the Phase Separator for other applications, please contact a Tecan representative.

In FluentControl the new MicroScript command "Detect Phase" can be used to find a liquid-liquid interface. The command has been verified for the use with 1000ul Tecan Disposable Tips.

The default values in the "Detect Phase" command were optimized for whole blood. These values can be used as a template for the evaluation of the separation of one aqueous solution from another, more viscous solution.

Detect Phase — volume/2 ml; 80 µl/s; 3.4 mm/s

Max. Pipetting Volume [µl]	volume/2	Trigger	Negative
Pipetting Speed [µl/s]	80	Window Size	60
Speed [mm/s]	3.4	Window Average Size	15
Acceleration [µl/s²]	aspirationAcceleration	Trigger Sensitivity	0.25
Deceleration [µl/s²]	aspirationDeceleration	Start Delay [samples]	200
		Enable Warnings	0

A new function "CheckIfPhaseHeightIsInExpectedRange(liquid level, phase height, confidence level)" enables flagging of samples where the interface was found outside of the expected range. Statistical data to determine the expected range was calculated from the phase detection results of 100 centrifuged blood samples from healthy individuals, collected in Streck tubes.

Repair installation no longer available

In previous FluentControl versions, it was possible to execute a repair of the installation. This feature has been removed in FluentControl 3.3. To repair issues with an installation, simply uninstall and reinstall the software instead. For help with FluentControl issues, please contact the local helpdesk.

3. Additional Information

Online Help

When FluentControl is in edit mode, pressing the <F1> key will open the Online Help. The section relevant to the selected or displayed GUI elements will be shown. Online Help content is identical to the FluentControl Manual.

Search function

FluentControl has a search function in the Infopad. Search results have the same drag and drop behavior as Controlbar elements. The search is active in all currently open Scripts, Modules and the Controlbar.
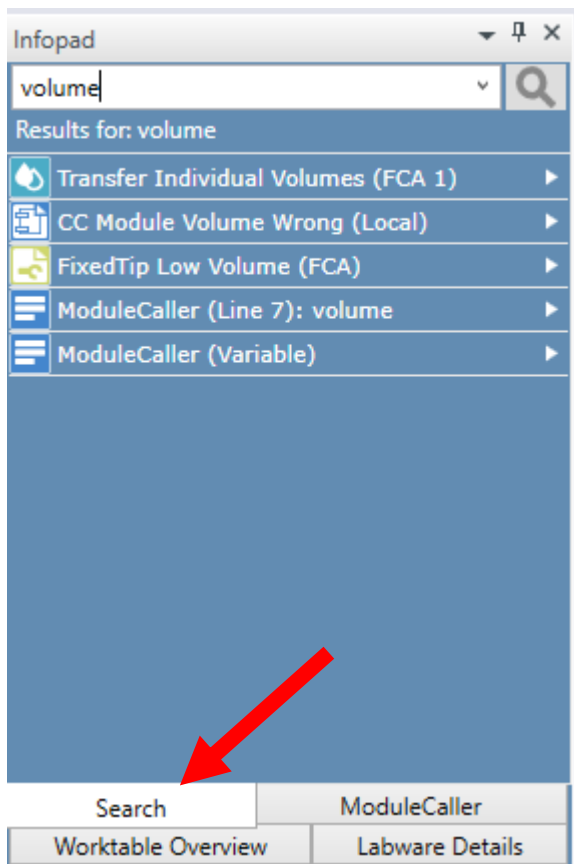
Touch monitor configuration

For more information on touch monitor configuration, refer to the ReadMe for DisplayLink driver in the Touch Screen Driver folder on the FluentControl installation medium.

Driver version mismatch between Windows and FluentControl

In Windows 'Add or remove programs', the version of the driver's DLL file is displayed. This is the actual version of the driver. In FluentControl Configure System > Drivers > Available Drivers the version of the driver's EXE file is displayed in the Version column, which does not (always) correspond to the actual version of the driver.

DeckCheck

The speed of the DeckCheck command execution depends on the PC hardware configuration. Consult the FluentControl Manual for recommended PC hardware specifications and for more information on configuring and using DeckCheck.

If any Hotels or devices are positioned at the right or left side of the worktable (i.e., the side panel is removed to accommodate a reader), the arm positions for DeckCheck image capture may need to be modified in Configure System. The default DeckCheck arm positions could be within the bounding boxes of such Hotels or devices, which would lead to an error at runtime. Positions for the right- and left-most arm can be configured.
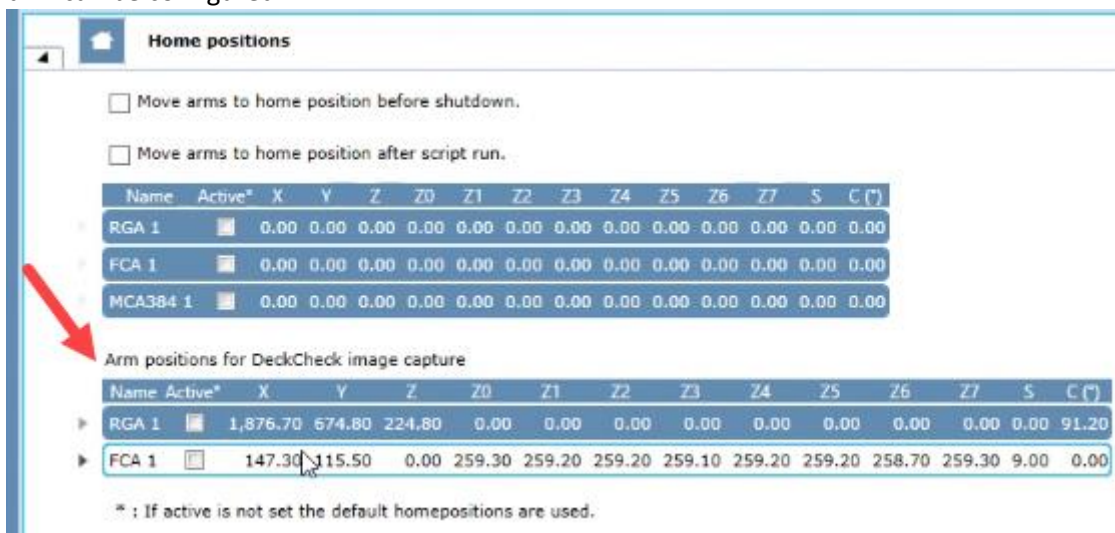
Sample Tracking cannot handle duplicate barcodes

If Sample Tracking is used and duplicate barcodes are part of the workflow, make sure they are renamed to be unique before the Labware is registered in Sample Tracking. For example, suffixes or index numbers may be added using the GetAttribute and SetAttribute functions.

Anti-virus software and FluentControl

Tecan recommends refraining from actively scanning hard drives or memory while a run is in progress in Fluent Control. If a virus scan must be executed during a run, exclude the following directories and their subdirectories from the scan:

```
C:\Program Files (x86)\Tecan
C:\Program Files (x86)\Common Files\Tecan
C:\ProgramData\Tecan
```

Labware of the same group must be placed next to each other on a carrier for 'Use next when empty'

The feature Use next when empty will not proceed to the next labware correctly if there are gaps within the labware group. In the figure below, if the first two blue tubes are empty, Use next when empty will not proceed to the blue tube to the right of the orange group. Instead, an error prompt is shown to the operator.
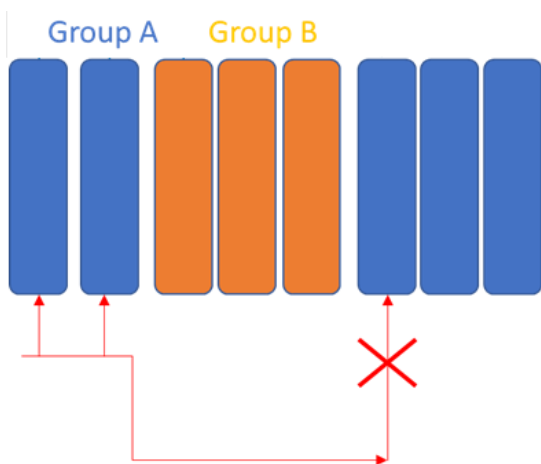
Teaching Nests next to MCA Thru Deck Waste Chute

Accessing the nests next to the MCA Thru Deck Waste Chute with the RGA in narrow orientation is not possible with the default vectors. If access is required, please duplicate the nests, and teach a custom vector. Z-travel should be taught higher than the Waste Chute to avoid Pathfinder errors.

When duplicating a manufactured labware item the custom attribute "ToolIDName" needs to be manually re-added

The custom attribute *ToolIDName* must be unique. When duplicating a manufactured labware item, for example disposable tips, this attribute is automatically removed. If a *ToolIDName* is not manually re-added, the context check error "Invalid DiTi labware selected. ToolType and ToolIDName Custom Attributes must be set." is shown if the item is used in a script.

Direct Commands & Worktable selection

Direct Commands will use the worktable which is open in the Worktable Editor when the Direct Command is executed. If no worktable is open, the Direct Command will use the worktable that has been most recently used in a run, including the most recent DiTi positions. Before executing a Direct Command, make sure that the arm is outside a contouring-error prone position (i.e., bounding boxes).

**FluentControl Scheduler: exporting reference files for Processes and for Carousel command**

Processes created in FluentControl 3.2 or lower and using the 'Assign labware by barcode file' feature must be opened in FluentControl 3.3 and saved again. Otherwise, the barcode file(s) referenced will not be included when exporting the Process with dependencies. The same applies for scripts or processes which use the 'LoadBCFromFile' command for the Fluent Carousel or Cytomat.

FluentControl Scheduler: intended use of Transfer Steps, correct use of Destination Step

Only one plate handling command must be used in a Transfer Step. The intended and optional use of customized Transfer Steps is to define additional:

- FES finger exchange commands
- MCA384 adapter plate exchange commands
- Commands to move disposable tip labware

Each labware defined in a Source Step in the Process will be brought back to its <base> after all Process Steps have been executed. There is no need to add a Destination Step with location <base>. If a plate shall be brought to any other place than <base>, a Destination Step defining the desired location must be added as the final Process Step of that labware (pink Step in figure below).
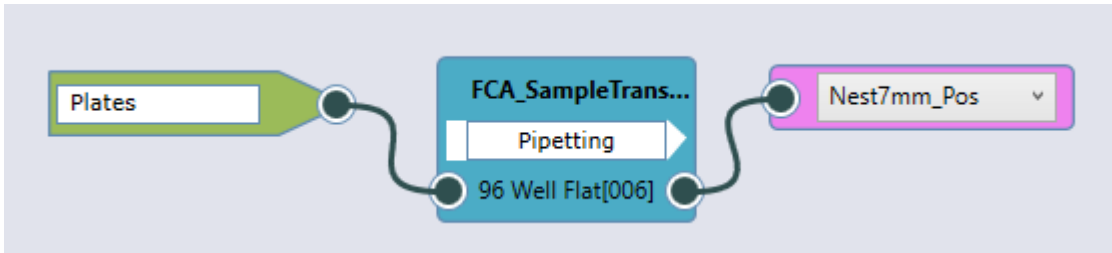
Trough dimensions and cLLD volume detection

Depending on the manufacturer of the labware, the dimensions of trough labware in FluentControl (for example the '300ml SBS' trough) may need finetuning so that the detected volume reflects the actual volume within the labware. Please refer to the manufacturer dimension specification of the inside of the trough to modify the labware definition in FluentControl.

MultiSense AirFCA: False detection cLLD error (ID 116223)

The MultiSense AirFCA liquid level detection can fail, for example if the surface of a bursting bubble is encountered by the tips. If the detection fails, the software automatically executes a retry. If the second attempt also fails, the error dialog below is shown, and the detection result is changed to 'False detection'.
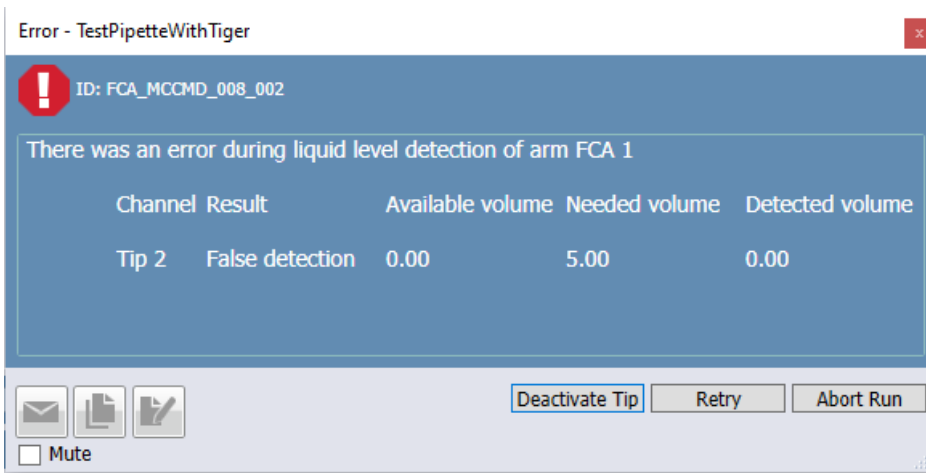
4. Compliance Features

This section contains a brief overview of some of the features that FluentControl offers to support compliant usage.

Audit Trail

Changes to all data objects, user logins and logouts, runs status, errors, changes to variables, and more are logged in the Audit Trail. By default, Audit Trail .csv files are saved in:
`C:\ProgramData\Tecan\VisionX\AuditTrail`

Electronic Signatures (requires Fluent Gx Assurance Software license)

Electronic signatures must be used in combination with User Administration. Enable this feature in Settings > User Administration.
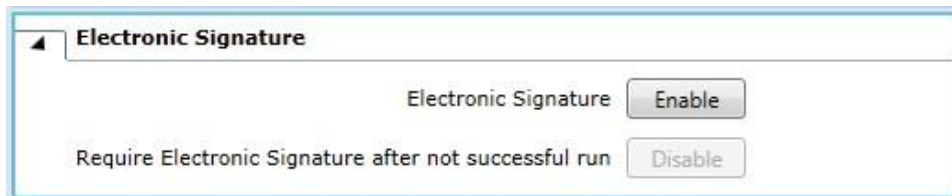
Reason and user credentials must be given upon saving any changes in FluentControl. The input will be saved in the Audit Trail.

Data Audit Tool (requires Fluent Gx Assurance Software license)

This tool can be opened via the Start menu. It verifies the electronic records for a given date range, including validity of all database files, validity of all Audit Trail logs, no presence of unexpected files and no missing files.
It also enables the export of the human readable files (.xml formatted checksum protected text files) to a single directory. This export can be used for an audit or for backup and archival purposes. Please note that this is an intensive check and may take a few minutes to execute.

Scheduled and Enforced System Care Methods

In the Method Editor, methods may be scheduled based on calendar events, like a recurring meeting in Outlook. If an scheduled, enforced method is due, no other methods can be executed until it has been run.
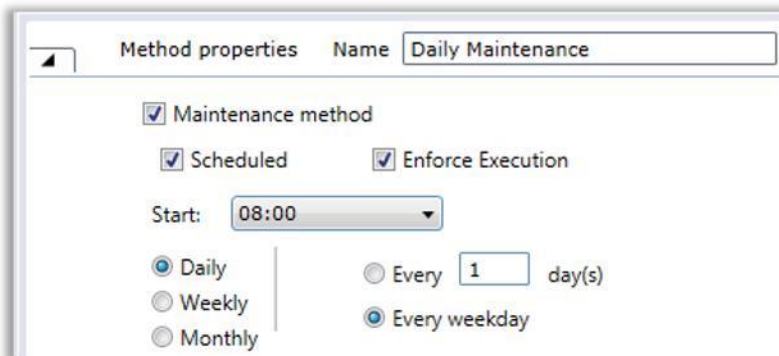
5. Known issues in FluentControl 3.3

This section contains information about known issues and guidance on avoiding or handling them. If issues not described here are encountered, please contact the local helpdesk.

Incorrect air aspiration error with new MultiSense AirFCA when using tracking (ID 116223)

Using the new MultiSense AirFCA with a liquid class with Tracking set to 'yes, supervised' can occasionally lead to incorrect "Air Aspiration Detected" error messages. Most Tecan default liquid classes do not use this setting, except for

- Ethanol Free Multi
- MasterMix Free Multi
- MasterMix Free Single
- Whole Blood Pierce Single
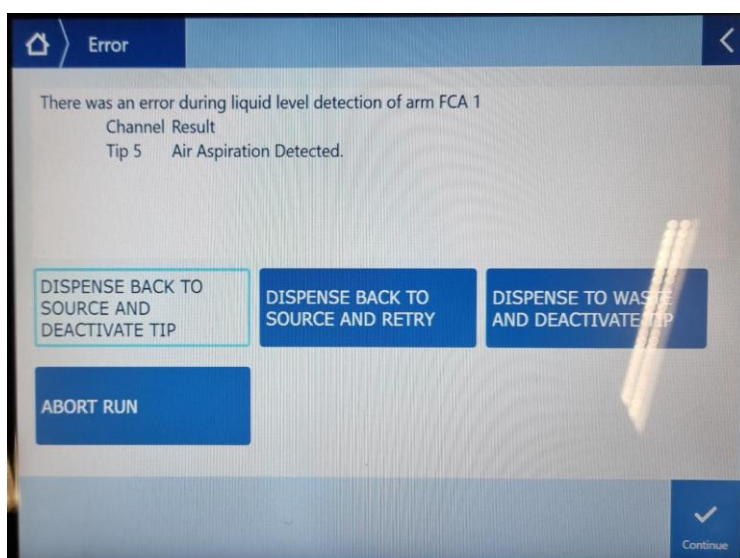- Water Pierce Single
- Water Contact Wet Multi

If you need to use Tracking with 'yes, supervised' and receive incorrect "Air Aspiration Detected" errors, please contact your local helpdesk so Tecan can advise you.

Simulation mode: FluentControl cannot return to edit mode after a run with a message "The execution of the transition failed" (ID 113138)

If an instrument configuration file created in FluentControl 2.8 or lower is used to simulate a run in FluentControl 3.3, the software cannot transition from run mode to edit mode. Task Manager must be used to close FluentControl. To resolve this issue, create new instrument configuration files in the 3D Simulator in FluentControl 3.3.
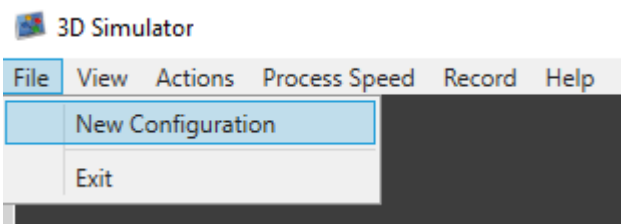
FluentID scan CSV file headers are incorrect / unclear (ID 110929)

The CSV output file created by the Start Loading command contains headers which do not always match the data. The table below can also be found in the FluentControl Manual and Online Help (F1).

GridPos	Grid position of the runner
SiteOnGrid	Always '1' for tube runners
TipNumber	Tube position in the runner
ConfigName	Barcode of the runner (the string from Custom Attribute FluentID_tUbeRunnerID)
RackLabel	Always 'N/A', currently not used
CarrierBarcode	Barcode of the tube, '$$$' if no tube was detected or '***' if the barcode could not be read
SRCRackID	Always 'N/A', currently not used

Default liquid class 'Whole Blood Pierce Single' is only verified for use with 200 µl (ID 115350)

The default liquid class 'Whole Blood Pierce Single' is verified for use with a volume of 200 µl. When using it with lower or higher volumes, the trailing air gap (TAG) is aspirated but not dispensed. The liquid class' MicroScript must be adapted when using it with volumes higher or lower than 200 µl. Default Liquid class 'Whole Blood Pierce Multi' can be used with all volumes defined in that liquid class.

After upgrade from FluentControl 2.5 or lower, Tecan Connect commands are not available (ID 114427)

The Common Notification Service (CNS) was replaced by Tecan Connect in FluentControl 2.6. When upgrading in place from FluentControl 2.5 or lower to FluentControl 2.6 or higher, the CNS command remain available in the Controlbar and the Tecan Connect commands are not present. To resolve this issue, contact the local helpdesk.

Touch monitor content shown on main monitor if instrument is disconnected or turned off

If the PC loses connection to the Fluent, for example if it is powered off or the USB cable is disconnected, the touch monitor content is displayed on the main monitor.
The easiest solution is to turn on the instrument, verify the USB connection, and restart FluentControl.
The fastest solution is to turn on the instrument and change a setting in Settings > Configure System > Drivers > TouchTools (e.g., de-select and re-select Use Full Screen checkbox).

Sample Tracking and Liquid Supervision errors

Aspiration Supervision Error: error handling '*Ignore and continue*' is flagging the sample as *"nothing was pipetted"*
Aspiration Supervision Error: error handling '*Dispense back and deactivate tip*' is flagging the samples as "*Not enough liquid*"

Sample Tracking and resuming pipetting steps interrupted by Active Stops

Sample Tracking will show a warning for any interrupted pipetting steps.

Microsoft Remote Desktop Protocol (RDP)

Tecan sporadically receives reports of issues when using RDP with FluentControl. FluentControl was not tested with Microsoft Remote Desktop Protocol (RDP) and compatibility is not guaranteed. Issues such as FluentControl crashes caused by using RDP will not be analyzed and resolved by Tecan product support.

Below are additional issues that may be encountered. Fixed issues will be listed in the Revision History of future versions of FluentControl.

ID	Title
116223	[MultiSense] False Air Aspiration Error
116261	Execution of Get Tips command takes long if tip box is empty and arm has to search for tips
116206	Pop up message not displayed on TouchTools and FluentControl crashes
115656	Information lost about labware position after method recovery
115232	Switch between real-mode and simulation does not always work
115962	Loading of the recovery information seems to last endlessly
115980	Scheduler: Timing Constraints section lacks a scroll bar so some constraints cannot be seen/entered
115949	Scheduler: incubation process steps aborted after a non-connected iteration had a washer error
115282	Scheduler: run finished although not all iterations are executed
115652	Scheduler: the run was stopped due to a hardware error and options retry and abort do not work
115433	Moving a plate with lid to a location specifying a lidding station fails
114939	Scheduler: process becomes corrupt after closing it without saving changes; when trying to delete it FluentControl crashes
115481	Scheduler: FluentControl not responding after automatically abort of script
108889	FluentControl shutdown via API not working
114510	Scheduler: error dialog after automatic restart and UMS-activation
110929	FluentID scan CSV file headers are incorrect / unclear
114357	Creation of restore point failed
115937	Duplicate Worktable names shown in Controlbar and Worktable tabs after saving a worktable via Save As with same name as another existing worktable
113138	FluentControl cannot return to edit mode after a run with the message "The execution of the transition failed"
115765	Null reference exception error in Sensitivity Calculation Direct Command when entering incorrect Labware Name
115080	AuditArch tool failed to move files with 'move to' command with access denied error
114427	After upgrading FluentControl 2.5 to 2.8, the CNS command remains available and there is no Tecan Connect command
114596	Scheduler: freeze after fatal error during Transfer Labware command execution
114424	Start of run recovery after restore point leads to dead lock
113267	Error Handling with multiple parallel subroutines can lead to unresponsive state of FluentControl
114356	Touch Tools always starts in full screen mode at FluentControl startup
113694	"Find and Replace Liquid Class" does not work for "Load Worklist" command
113950	Scheduler: Trace View message is shown to switch into task mode although the switch is done automatically
114198	FluentControl run aborted after 47 days. Windows system unresponsive.

112630	"Open door detected. Please close the door" message is shown for "Error sending Command" carousel error.
114576	Tool Location driver cannot bring plate from Carousel transfer station back to base in tower
109289	When opening the front shield after Stop/Resume in a Touch Tools command, an error message about open door is displayed
111635	DeckCheck: defining a big Region of Interest (almost entire picture) too fast does not work
110380	Default data base items with "approved" status are included in default import library

6. FluentSetup 3.3

After upgrade from FluentControl 2.8 or older to FluentControl 3.3, QC action "Gripper Alignment" needs to be re-executed

Due to a change in the RGA initialization procedure in FluentControl 3.0, the RGA rotational axis may have a small deviation of around 3-4° in its position. Therefore, the QC action "Gripper Alignment" needs to be re-executed to set this offset back to 0. A Tecan Field Service Engineer must perform this intervention.

Execution of DeckCheck Setup cannot be executed twice in a row (110011)

This issue occurs sporadically and can be resolved by restarting FluentSetup and executing DeckCheck Setup again.