

FluentControl™

TAKE CONTROL OF TECAN'S MOST POWERFUL LIQUID HANDLING WORKSTATIONS



 **TECAN.**

One great software, two powerful interfaces.



Designed for those who ‘press go’, daily activities such as running methods and routine maintenance become as straightforward as using the smartphone in your pocket. Users intuitively know what to do next.



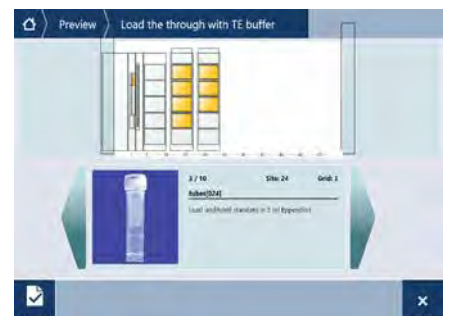
The Fluent® and Fluent Gx are powerful automation platforms, yet FluentControl keeps it simple with TouchTools™, a dedicated operator interface on the touchscreen of the instrument itself. Everyday interactions – such as starting a run, entering key values and reacting to user prompts – are cleanly presented, delivering user-friendly operation without the need for any extra programming.



Create custom instructions to guide operators through each method. Embed your SOPs into every run, using pictures, videos and wording specific to your lab or protocols to reduce the training necessary for new operators, and make day-to-day tasks easier than ever before.



This simple interface is not limited to simple activities. For example, if your computer loses power in the middle of a method, TouchTools can guide the operator through recovering the run, showing what has been done, what still needs to be done, and where everything should be.





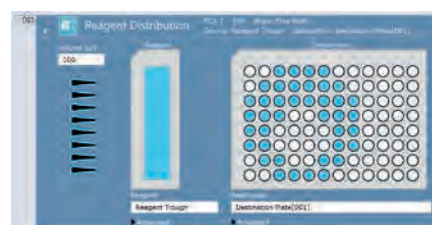
FluentControl is designed to empower scientists to build, optimize and maintain their own methods, without the need for programming expertise. By separating everyday work from the configuration of new methods, Tecan has created ideal tools for both, without compromise.

Users can simply drag and drop commands to create a method, using the 3D editor to configure their worktable elements and labware. A built-in auto-context check feature reviews the methods as you create them - offering help if something might not work - and you can even run your finished method in a **3D Simulator**, without wasting reagents. Even infrequent users can understand how to read and edit existing methods, avoiding the need to wait for an expert to make changes and giving you control of your project timelines, costs and data quality.



How does FluentControl help those new to programming?

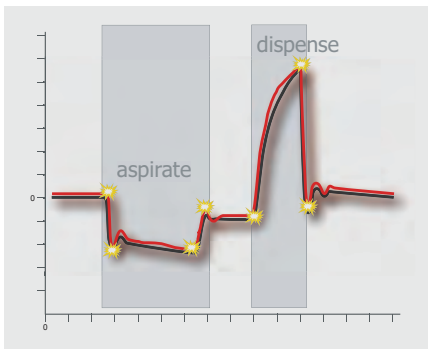
Smart Commands allow you to program common tasks - such as distributing a reagent or transferring samples in replicate - with a single command. In addition to intuitive editors and the auto-context check feature, pressing F1 during editing opens the integrated help system. Every action also has an 'undo' option, even if the computer is restarted. For even greater reassurance, a 'restore point' is automatically generated with every run, allowing you to roll back to a previous point at any time.



The Fluent and Fluent Gx platforms are **'teach-free'**. After Installation Qualification, default carriers and labware can immediately be used in methods. No additional teaching is required, thanks to a combination of the hardware's mechanical accuracy and precision and the software's carefully refined definitions. Zero-G allows one-touch teaching of devices integrated below deck or to assist in the positioning optimization that may be required to pipette sub-microlitre volumes in high density labware such as 1536 well plates.



Hand guides Robotic Gripper Arm (RGA) to the correct centrifuge loading position below the deck using Zero-G technology.



Smart Automation

The Fluent is equipped with cameras and pressure sensors to allow AI-algorithms to detect worktable and pipetting errors, thus ensuring better process security. DeckCheck helps the operator correct any worktable loading mistakes, increasing the number of successful runs. Pressure Monitored Pipetting (PMP) AI evaluates pressure curves in real-time to help identify pipetting anomalies and mitigate the risk of undetected pipetting errors.



Is it possible to customize the system?

If the hardware can do it, FluentControl can control it. Creating custom labware and carriers is easy. Need to control a special device? FluentControl is ready for that too. Any SiLA2-ready device can be controlled with the default driver. Tecan has an extensive driver library available for other devices. FluentControl also offers flexible interaction with external programs. Execute applications or start/stop runs from your own software's custom code via VB.NET or use the built-in Fluent-API.



Can FluentControl interact with my existing data systems?

There are many options for passing data to and from a LIMS or other data system. The Import Variable and Export Variable commands make it easy to get data to or from external files, while the Worklist feature allows you to pipette directly from text files.



Notifications directly to your mobile

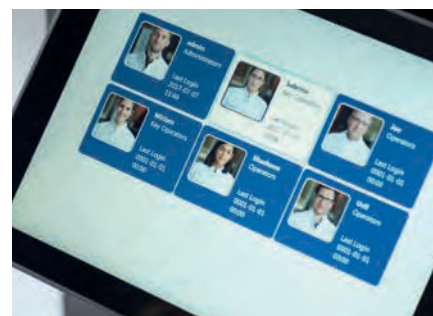
Tecan Connect™ informs you on your mobile device when user interactions are needed or your instrument status has changed. Available for Apple iPhone and Android mobile devices, Tecan Connect gives you the freedom to walk longer and further away from your instrument. Visit https://ifttt.com/tecan_connect to see examples of what you can do. Instrument and consumable usage can also be tracked in Introspect™, allowing you to further optimize your laboratory workflow.

Simplifying compliance with the Fluent Gx automation workstation.

Tecan developed the Fluent Gx Assurance Software with highly regulated environments in mind – such as clinical, GMP and QC laboratories – offering a host of features designed to make compliance with relevant national or industry guidelines as straightforward as possible.

User management for controlled access

Multi-level user management allows customizable control of access to methods and software features. With three default user levels – operator, key operator and administrator – plus the ability to define custom roles, this is ideal for busy, multi-user labs. Administration is further simplified for labs using Windows® Active Directory, allowing each employee's Windows ID and password to provide direct, traceable access to FluentControl.



Uncompromised security

FluentControl's optional method approval feature delivers process security for regulated environments without compromising method development. This ensures that only approved and validated methods are used for day-to-day activities, while providing application specialists the ability to create and test new automation workflows.



End-to-end traceability

Traceability is crucial for regulated laboratories and clinical activities. FluentControl's Sample Tracking feature traces every sample, from initial identification using a handheld or integrated 1D/2D barcode scanner through to the reporting of final results, including data from Magellan™ data reduction software.





A detailed, secure and audit-ready log of all actions for each sample is generated, which can be automatically uploaded to your LIMS.



Assured data integrity

FluentControl's electronic records help laboratories to meet stringent regulatory standards for data security – such as those defined by FDA 21 CFR Part 11 – by providing protected copies of scripts, methods, carrier and labware definitions, liquid classes, and system configurations. Each file has a checksum to guarantee data integrity, and an optional electronic signature feature provides a detailed record and reason of any changes made. For maximum process security, this feature requires the user to approve any run that has been completed with errors or warnings.

Maximum compliance, minimal manual input

The Fluent Gx Assurance Software offers advanced features to streamline regulatory activities, helping laboratories to demonstrate compliance with minimal manual input. The File Version Checker provides rapid, fully automated verification of the integrity of all executable software components – meeting the needs of GMP facilities and supplementing existing cybersecurity measures – while the Data Audit Tool performs a similar function for electronic records, ensuring data integrity.



Product security

FluentControl adheres to both external standards and guidelines, as well as the Tecan Product Development Process, to ensure product security. For full compliance, Tecan production sites in Switzerland and Austria are ISO 9001 and EN ISO 13485 certified, and software development complies with EN 62304. Our process implements FDA Guidance on Postmarket Management of Cybersecurity in Medical Devices as well as further country/region-specific FDA guidelines and requirements. Best practice references include, but are not limited to, the NIST Cybersecurity Framework, the NIST SP 800 series and the OWASP Top 10.

Boost your Fluent's productivity.

FluentControl Scheduler simplifies process definition and elevates productivity to new highs, giving you unforeseen flexibility in your workflow. With convenient 'drag and drop' process creation, FluentControl Scheduler significantly increases throughput by automatically performing tasks in parallel.

Increase productivity with dynamic scheduling

The dynamic scheduler and fully integrated process editor simplify workflows for laboratories that run multiple copies of a process in parallel. In a busy laboratory setting, this greatly increases throughput, allowing the platform to, for example, simultaneously incubate one plate, pipette samples into another and wash a third.

Intelligent and compliant

The entire schedule of a run can be reviewed in detail before beginning, and then followed in real-time via an easy to interpret Gantt chart. Do you need to execute more methods? No need to wait for a run to finish, simply add more methods to the running system using the touchscreen. Timing constraints are continuously monitored, and violations are flagged in the run report to simplify GMP record keeping and regulatory compliance. During the run, the system reacts dynamically – making adjustments based on actual times taken – to continuously ensure optimal throughput.

Set up runs lasting days or even weeks

Effortlessly create long running assays by using the Create Task command to define when a process should be executed. Creating a task is just like entering an appointment in your calendar. Monitor your assay's progress and dynamically decide when and what process to execute next. Have your cell cultures grown insufficiently? FluentControl Scheduler will automatically plan another round of feeding and measuring. During incubations, the instrument can be used to perform system maintenance, program scripts or execute runs, allowing you to get the most out of your Fluent.

Trust your Fluent – walk away with confidence

For complete peace of mind, operators can use Tecan Connect to remotely monitor their instruments' progress – with remote notifications if user interaction is needed – freeing up staff for other high value activities. Instrument and consumable usage can also be tracked in Introspect™, allowing you to further optimize your laboratory workflow.





The Fluent Gx is an open automation platform product for general laboratory use. It is intended for routine laboratory tasks, such as general purpose pipetting and general purpose liquid handling and robotic processes. Not all options are available in all markets. Certain options when combined with Fluent are for research use only. Configuration of options may impact intended use – please consult your local Tecan office.

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