

Fluent<sup>®</sup> Laboratory

Automation Solution

for Genomic Workflows.

INCREASED PRODUCTIVITY POWERED BY TECAN'S APPLICATION EXPERTISE



# Get on the fast track to genomic results.

**Fluent's groundbreaking design delivers more capacity and increased speed for genomic workflows. This innovative solution offers superior precision, higher throughput and longer walkaway times. Get more done in less time, with greater confidence.**

## 1 INTUITION BUILT RIGHT IN

Every Fluent comes with a dedicated **touchscreen interface** with a unique, run-only mode environment that can be individually tailored to specific applications and personalized for each user. Users require minimal training as the interface clearly defines every action for more straightforward, consistent operation.

## 2 SIMPLER WORKFLOW DESIGN WITH FLUENTCONTROL™

Discover the latest innovations in software control with **Smart Commands** that make it easy to program with confidence. Enjoy the flexibility of building a script with drag and drop elements, reviewing complete protocols in a 3D simulator and creating user interfaces for day-to-day operations.

## 3 DEVICE INTEGRATION FOR GENOMIC WORKFLOWS

Enjoy true walkaway operation with Fluent's seamless integration of complementary peripherals, all fully managed through FluentControl for maximum throughput and minimum operator input. The system offers seamless integration of temperature-controlled blocks, thermocyclers, readers, plate sealers and centrifuges to handle your complete workflow.





#### 4 SAVE REAGENTS AND SAMPLES

For optimal liquid handling performance, Fluent is equipped with **Adaptive Signal Technology™**, a new generation of liquid level sensing. This technology provides real-time aspiration monitoring, enabling the use of smaller sample volumes and minimizing reagent consumption, as well as providing exceptional automated error handling.

#### 5 GREATER PEACE OF MIND

Ensure the integrity of your results with a broad array of fully integrated technologies and capabilities:

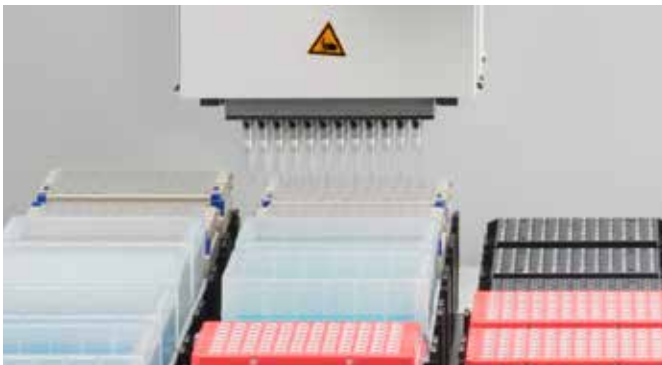
- 1D/2D barcode reading for efficient sample tracking
- Primer and adapter tracking for PCR and NGS workflows
- Plate move confirmations and user interaction logs

#### 6 EVOLVING WITH YOUR NEEDS

Fluent's patented **Dynamic Deck™** allows the high capacity worktable to be freely configured and easily reconfigured to accommodate alternative workflows. The cabinet-mounted option lets you take full advantage of the system's in-deck and below-deck access, expanding capacity and functionality without extending the instrument's footprint.

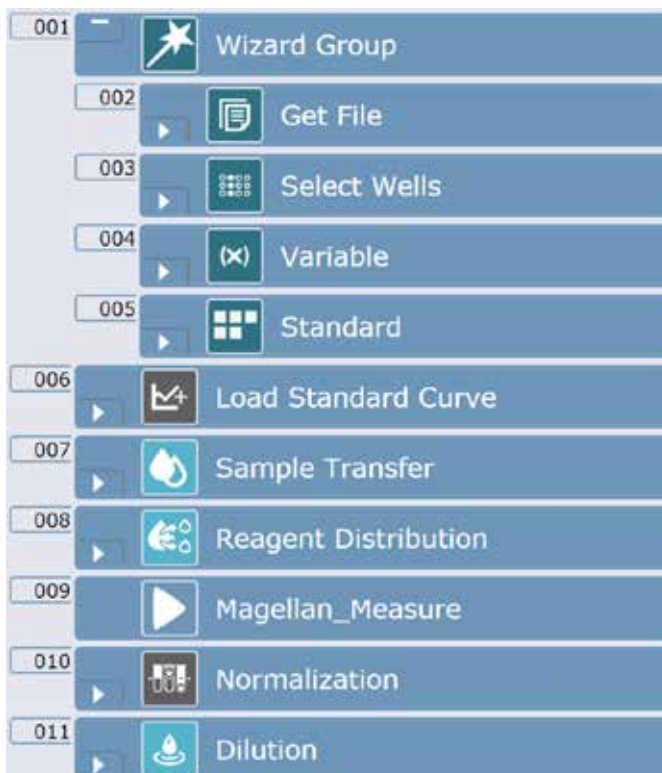
# Do more in less time – and less space.

**Tecan's application experts can help you optimize your workflow, freeing up staff time and maximizing your productivity.**



## **FASTER NUCLEIC ACID PURIFICATION**

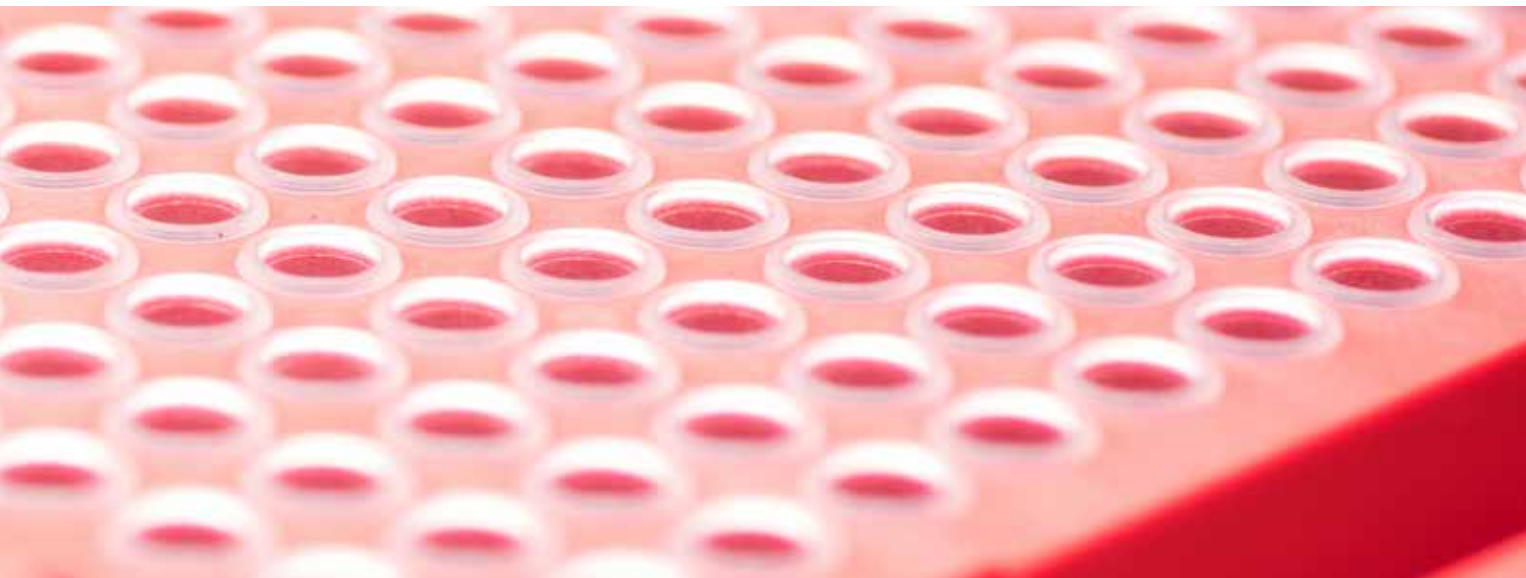
Benefit from Tecan's extensive experience in automating NAP kits to configure the ideal solution for your magnetic- or filter-based purification methods. Fluent provides scalable solutions to match your throughput needs, with the flexibility to switch between random access samples, 96-well plates and 384-well formats as required.



## **INTEGRATED QUANTIFICATION AND NORMALIZATION**

Fluent offers fully automated nucleic acid quantification and normalization - using either fluorometric or bead-based techniques - ensuring standardization of samples to your target concentration for storage or processing.

- Quantify your samples after purification, prior to reaction set-up or during NGS protocols with an integrated multimode reader
- Use FluentControl to write methods for virtually any genomics application, with dedicated commands for creating standard curves, DNA/ RNA normalization, etc.



## NEXT GENERATION SEQUENCING SAMPLE PREPARATION AND REACTION SET-UP

Rapid technology advances have made NGS a cost-effective alternative to PCR or array-based techniques for many applications, allowing pooling of hundreds of samples in one sequencing run. The speed, accuracy and precision of Fluent make the system ideally suited to preparing NGS libraries from multiple 96- or 384-well plates.

### Benefits include:

- **Straightforward operation**, allowing you to customize the user interface to show only the relevant options
- **Greater reproducibility** between operators and over time, with high precision pipetting to reduce process variability
- **Flexibility** to expand for increased throughput, allowing you to switch between 96- and 384-well formats even during a protocol
- **Enhanced process security** with Active Stop and Resume and Method Recovery options minimize risk of “washing away thousands of dollars” in lost samples and reagents
- **Extended walkaway operation** thanks to easy integration of 1D/2D barcode readers, thermocyclers and microplate readers, and a range of storage options for plates and tips
- **Easy integration** into your lab, with full sample tracking and LIMS compatible file formats for simple data handling



\*Example configuration for Ion AmpliSeq library preparation

# Enhancing productivity from the inside out.

**Fluent delivers unmatched positional accuracy and pipetting precision, offering enhanced process security and complete peace of mind for walkaway operation.**

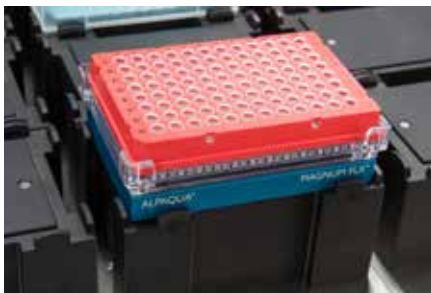
## DRIVING REPRODUCIBILITY

The **Flexible Channel Arm** is ideal for the preparation of samples, enzymes and adapters, enabling access to virtually any tube or well configuration. The ability to include two Flexible Channel Arms offers the unique choice of air and/or liquid displacement pipetting on one instrument.

## SEAMLESS AUTOMATION

### Device integration to fully automate your workflows

Fluent is designed to simplify daily tasks by integrating all the modules and devices required for complex automation. The **Dynamic Deck** provides exceptional capacity in a compact footprint, allowing integration of:



**Magnetic separation** – for nucleic acid extraction and clean-up



**Reader integration** – for rapid DNA quantification



**Stackers and carousels** – for longer unattended runs



**Heating and cooling devices** – for sensitive reagents and incubation steps



**Thermal cyclers** - integrated PCR for complete workflow automation

FluentControl also offers straight-forward integration of other third-party devices, including support of SiLA devices, and **Zero-G teaching** to simplify set-up.

### Simple logistics

The **Robotic Gripper Arm** quickly moves labware between the workdeck, storage units and integrated devices, with an optional barcode reader for positive identification of samples and reagents. Its unique **Finger Exchange System** allows it to switch between grippers on the fly, offering secure transport for plates and tubes.



Finger Exchange System

### Enhanced process security

Your samples are precious, so FluentControl provides the highest level of process security, with features such as:

- **Active Stop and Resume** – Want to add a reagent during a run? Just open the door, add the reagent, close the door and let the instrument continue
- **Sample Tracking** – Continuous ID-based tracking of all pipetting steps and robotic movements, so you always know a protocol has been processed correctly
- **Method Recovery** – Allows a process to be recovered, even after a fatal error such as a power outage
- **HEPA hood** – Maintain a clean environment throughout the workdeck to protect your samples



2-D bar code reader

### ADDING SIMPLICITY TO EVERY INTERACTION

FluentControl is designed to meet the needs of both day-to-day operators and system programmers without compromise. A dedicated programming environment simplifies protocol development, while the built-in touchscreen interface guides users through daily tasks.



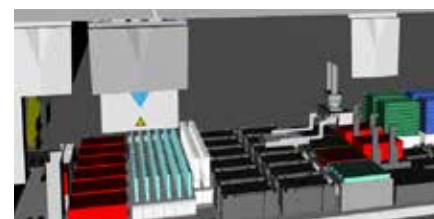
Touch screen interface

### Faster, easier scripting

FluentControl's drag and drop command editor and intuitive 3D worktable simplify the development of new protocols, with automatic error checking to ensure rapid, easy scripting.

Highlights include:

- **3D simulations** – create and test new scripts virtually, improving laboratory productivity
- **Advanced undo/redo options** – even after saving or rebooting
- **Method approval** – prevent unauthorized changes to validated protocols

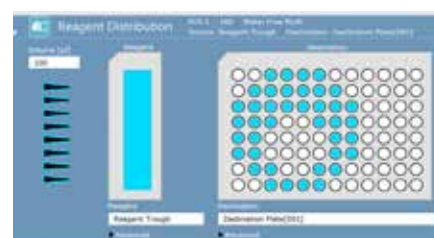


3D simulations

### Smart Commands for common genomic workflows

These simple, one-line programming tools make it faster and easier to generate protocols, managing common activities such as:

- **Sample** transfers and aliquoting replicates
- **Reagent** distribution into a plate or series of plates, from a tube or trough
- **Standard curve** generation
- Importing **quantification** results
- **Normalization** of samples based on in-run measurements or imported files



Smart Commands – Spend less time setting up common pipetting tasks

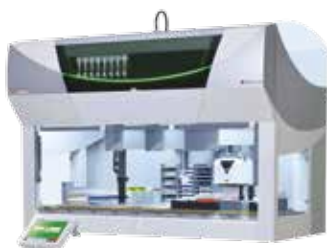
# Optimal capacity. Optimal throughput. Optimal results.

## FLUENT 480



30 plate positions

## FLUENT 780



48 plate positions

## FLUENT 1080



72 plate positions

### DISCOVER THE FLUENT LABORATORY AUTOMATION SOLUTION

To see Fluent in action and learn how it can improve the productivity of your laboratory, contact your nearest Tecan office or visit [www.tecan.com/fluent](http://www.tecan.com/fluent)

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