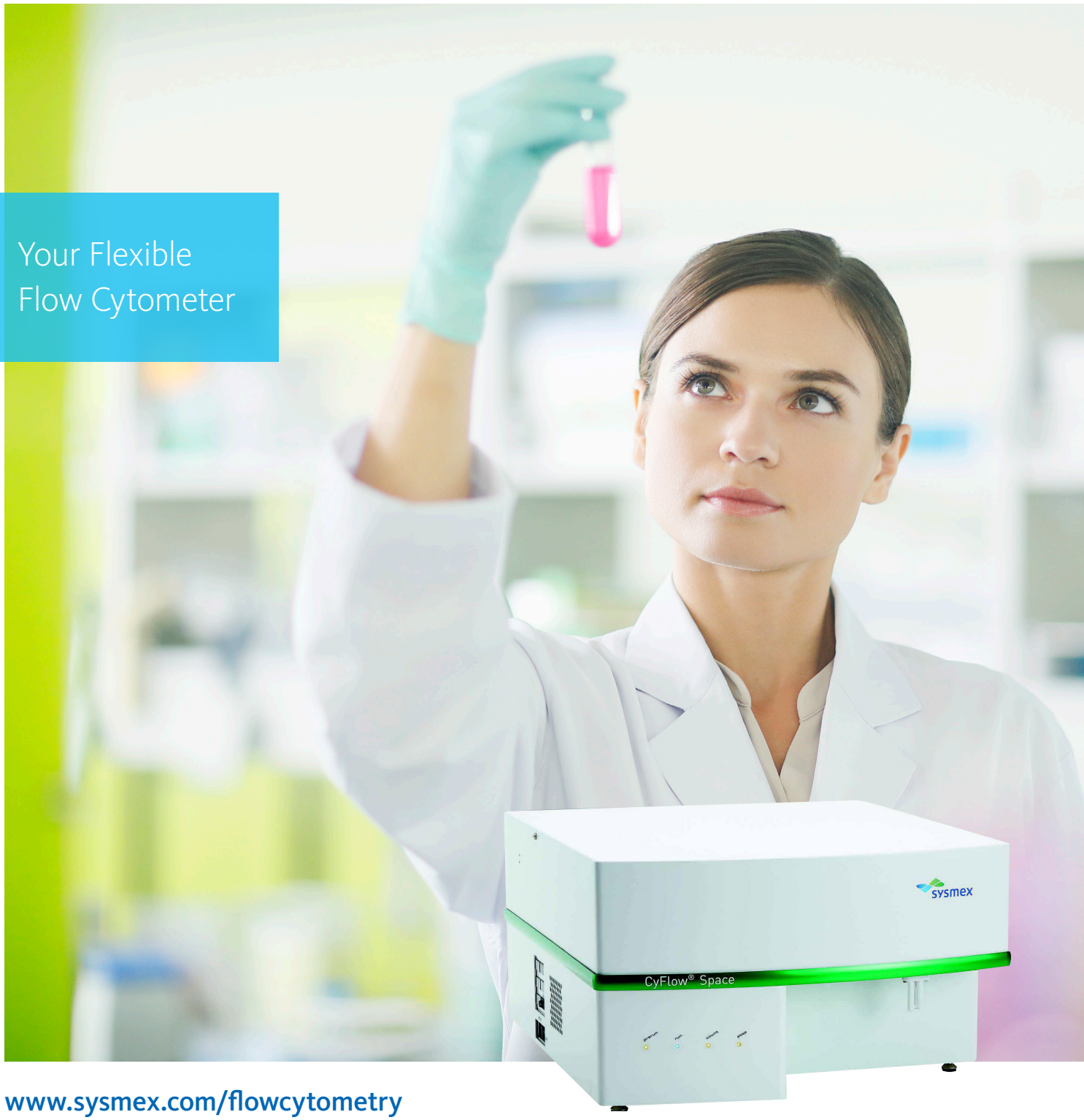
sysmex | Lighting the way with diagnostics

CyFlow™ Space

Your Flexible
Flow Cytometer



www.sysmex.com/flowcytometry

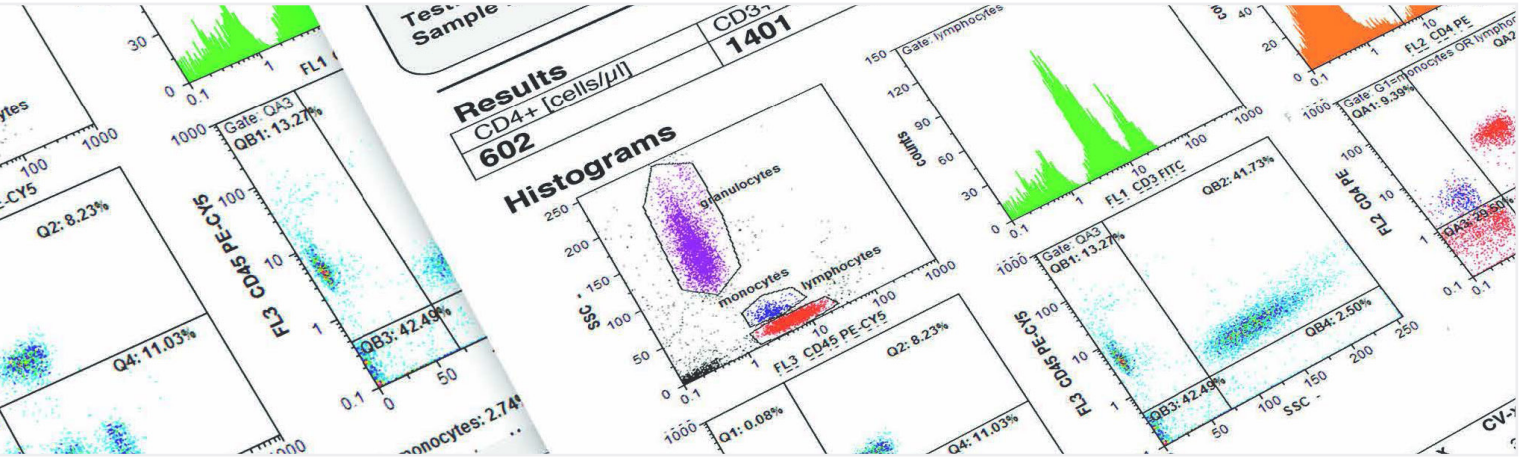
Ultimate Flexibility

Modular System:

The CyFlow Space flow cytometer is a modular system with ultimate flexibility: from a basic configuration up to a multi-laser and multi-parameter system, you're sure to have access to the right tools.

Forget about fixed instrument configurations and limited laser wavelengths. The CyFlow Space allows you to customize your flow cytometer for your individual application and it can handle sophisticated bespoke panels and experiments. You can adjust every fluorescence channel to match your demands with 10+ various laser options, up to 16 parameters and a vast range of optical filters. Upgrades and adjustments are simple, quick and can be performed on site.

Research Field	Industrial Field
Biomedical research	Quality control
Microbiology	Industrial biotechnology
Cell biology	Industrial microbiology
Biotechnology	Food & beverage industry
Agroscience	Plant & animal breeding
Marine biology	Aqua culture
Environmental science	Industrial development



Report of a multi-color analysis of CD3/CD4/CD45 on CyFlow Space with FloMax™ software.

Flexibility for Your Changing Needs

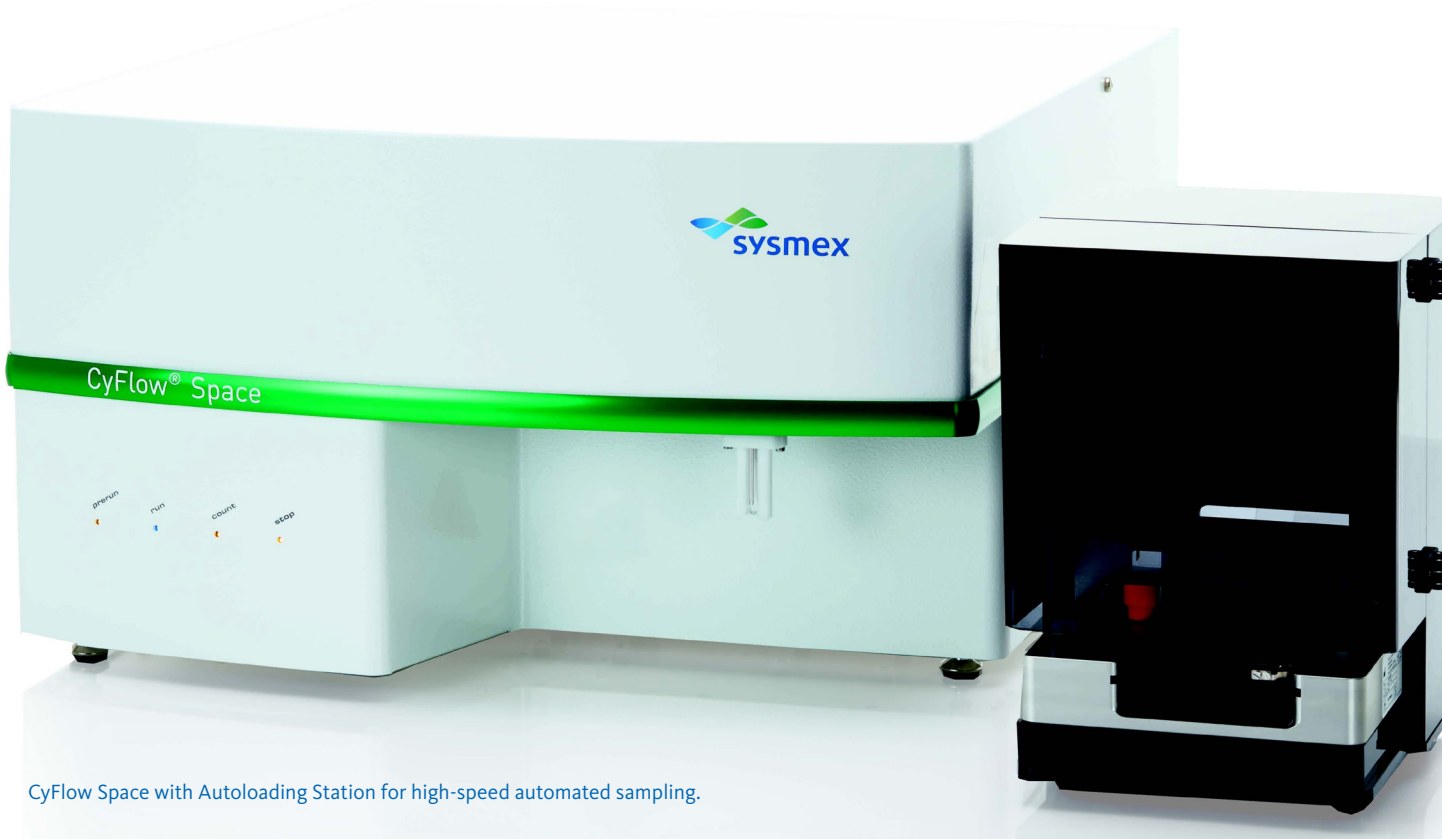
Cell and particle analysis, whether from blood, plasma, tissue, plants, cell cultures, or other materials, is a crucial aspect of research and development. To obtain statistically significant results and the confidence to proceed and invest further in your project, you need high throughput and a precise system for the detection of each cell type. The ability to measure thousands of cells within seconds is essential.

Flow Cytometry (FCM) is the answer. Since it is a non-destructive method, it reflects the real distribution on a cellular level, quickly and with the utmost accuracy. Of course, FCM is not new as it has been a proven technology for over 45 years. With many available options, choosing the analyzer that meets both your immediate and future needs is critical.

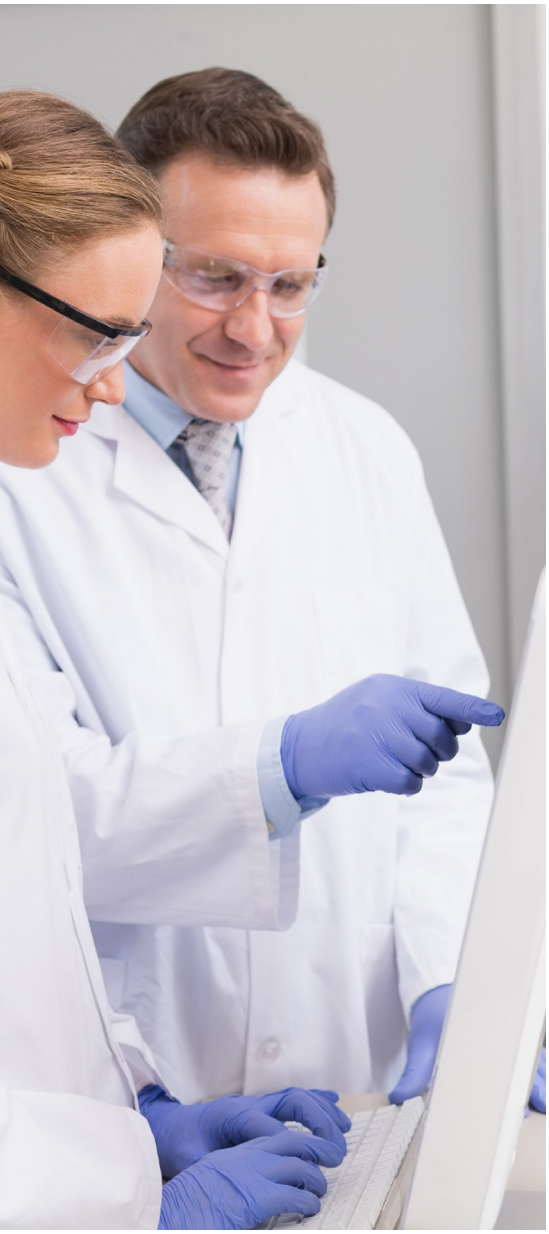
The CyFlow Space Affords You Space to Grow and Adapt

The CyFlow Space flow cytometry system is unique in its offering of flexibility and precision. It allows you to adapt to your changing needs thanks to its changeable setup. You may extend or upgrade it modularly if your needs change. This level of adaptability allows the instrument to be used in a variety of situations, including routine settings, specialized research departments and core facilities with connected working groups.

In terms of FCM protocols, new fluorochromes with different spectra are launched to the market regularly. To take advantage of these changes, the ability to work with optimized excitation lights through different color lasers and suitable optical filter sets is a necessity. This calls for instruments that can be customized with respect to their configuration, but at the same time, remain user-friendly with a straightforward workflow. You want to concentrate on your research and not a complicated tool.



CyFlow Space with Autoloading Station for high-speed automated sampling.



Ease of Use

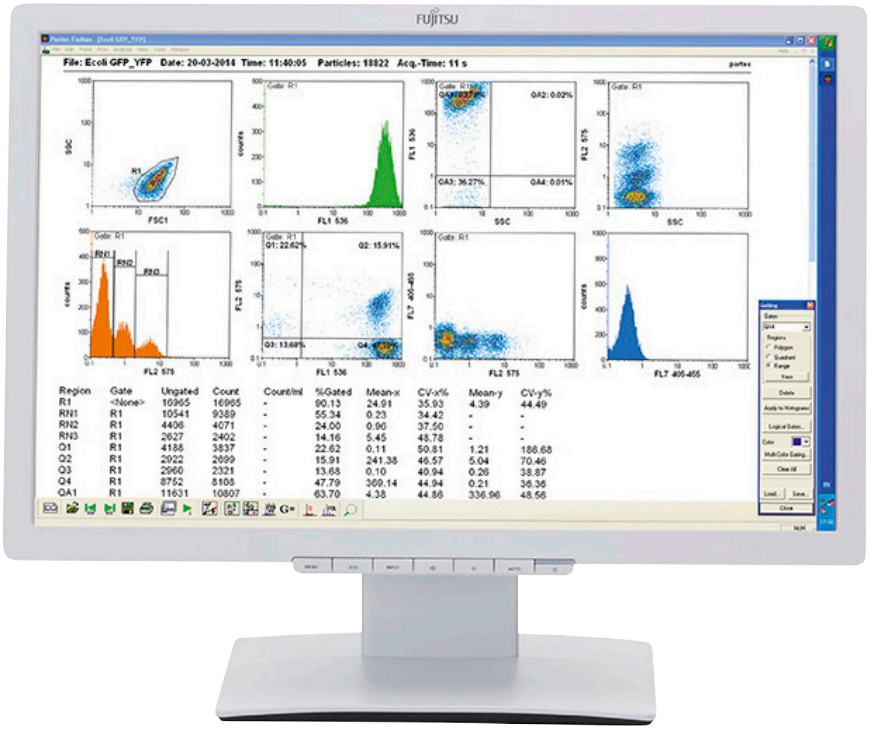
The CyFlow Space operation is intuitive and gives users easy access to the instrument's full capabilities. CyFlow Space maximizes uptime with a 5-minute startup and easy automatic shutdown. To further its user-friendliness, the CyFlow Space's operating software, FloMax, is intuitive and efficient. It integrates instrument control, including convenient acquisition and analysis, with both online and offline data analysis and a compensation tool in a single software package. Many of its functions are just a click away, such as digital compensation of fluorescent crosstalk. Pre-defined and freely adaptable instrument setting and panel modes facilitate switching between different applications.

FloMax is designed for applications including immunology, cell biology, microbiology, and biotechnology. To ensure compatibility with many of the most common FCM analysis programs, it uses the Flow Cytometry Standard (FCS) data format and lets you generate individual data reports in flexible formats.

The unique Sysmex counting principle of True Volumetric Absolute Counting (TVAC) eliminates the need for time–consuming and costly counting beads. The integrated CCD camera allows you to monitor the signal directly on the display to instantly check the sample flow.

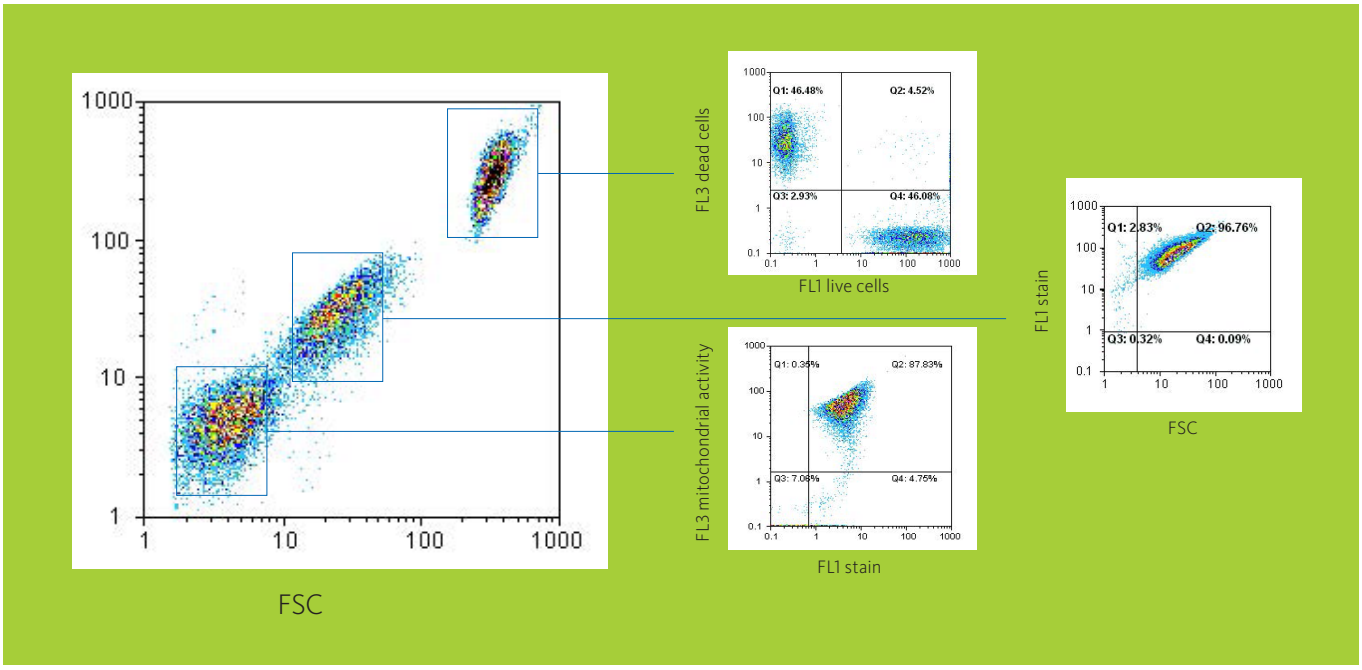
Modular Extension Possibilities

As part of the Sysmex FCM concept, the CyFlow Space can be expanded and upgraded modularly by adding an Autoloading Station. Upgrade options include adding laser light sources, optical parameters and fluorescence channels.



CyFlow Space Autoloading Station

To achieve higher throughput, you can add the Autoloading Station, which enables automated and accurate uptake of samples with high-speed sample loading. The station performs a flexible sample-to-sample cleaning procedure and can read both 96- and 384-well plates.



Separation of differently sized organisms during a single measurement in a scatter plot: staphylococcus sp. – lactobacillus sp. – saccharomyces cerevisiae. The subsequent analysis comprised mitochondrial activity measurement of staphylococcus DNA staining of lactobacillus, and viability measurement of saccharomyces.

A Long History of Quality and Accuracy

Since 1968, when Partec launched the first commercially available flow cytometer, we have been tightly focused on developing our technology in line with market demands. Sysmex stands for high precision and quality. With decades of experience in the biotechnology market, our technology has been used with great success in various fields in industry, research and development.

The high quality of our FCM instruments results in systems with exceptional stability and sensitivity. In the CyFlow Space system, a highly precise optical bench is combined with a powerful electronic and computer system resulting in real-time signal analysis.

Technical Specifications

Lasers/LEDs	Detectors	Exemplary dyes
BLUE LASER 488 nm (50 mW fixed/ adjustable to 200 mW)	Green Orange Orange Red Red I Red II Far Red	FITC / GFP/Alexa Fluor 488 PE / YFP PE-Texas Red / PI / PE-DL-594 PE-Cy5 / PerCP PE-Cy5.5 / PerCP-Cy™ 5.5 PE-Cy7
RED LASER 638 / 640 nm (25 / 40 mW)	Red I Far Red	APC / APC-Cy™ 5 PE / YFP APC-Cy™7 / Alexa 700
VIOLET LASER 405 nm (100 mW)	Blue Green Orange	Pacific Blue™ / CFP / Pacific Green Am Cyan / brilliant violet™ 605 Pacific Orange™ / brilliant violet™ 605
UV LASER 375 nm (60 mW) HIGH-POWER UV LED 365 nm	Blue	DAPI / Hoechst 3342
GREEN LASER 532 nm (30/100 mW)	Orange Red	mStrawberry / PE mCherry / PI / PE-Texas Red
YELLOW LASER 561 nm (100 mW)	Orange Red	PE / DS Red / PE-Texas Red PE-Cy5 / PI / mCherry / mRuby
ORANGE LASER 594 nm (50 mW)	Orange Red Red Far Red	Texas Red / Alexa Fluor 594 mStrawberry APC / mCherry / mRFP / JRed mPlum

Available light sources and exemplary detector configurations

Light Sources and Optics	Up to five light sources on the standalone analyzer.
Flow System	Quartz flow cuvette for laminar sample transport and hydrodynamic focusing Biosafety cleaning system True Volumetric Absolute Counting (TVAC) based on mechanical volume measurement
Electronics and Signal Processing	Selectable linear, 3- or 4-decade logarithmic scale 16-bit analog-to-digital converters, selectable trigger parameter Pulse height, area and width analysis for doublet discrimination
FloMax Operating Software	Based on Microsoft® Windows® Master licence for instrument control, data acquisition and data analysis Data analysis software for multi-parametric flow cytometry data files in FCS 2.0 or FCS 3.0 standard format
Computer System	Latest industry standard Windows PC with Microsoft Office Microsoft Windows 10 professional 64-bit operating system 22" color LCD TFT display DVD-RW, USB and Ethernet ports
Options	Immersion gel coupling CyFlow™ Space Autoloading Station with CyPad software
Weight	Approx. 37 kg
Dimensions (W x H x D)	Main unit: 560 x 300 x 650 mm

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