

# More flexibility for your flow cytometry lab.

## FC 500 Flow Cytometer Series



## Specifications

### Lasers

- Uniphase Argon ion, 488nm, 20mW output
- Coherent Red Solid State Diode, 635nm, 25mW output

### Flow Cell

150 x 450 micron rectangular channel BioSense enhanced optics, quartz mounted, with vertical (upwards) flow path for superior hydrodynamic focusing.

### User-Interchangeable Optical Filters

- Band Pass (BP): 525nm, 575nm, 620nm, 675nm, 755nm
- Dichroic Long Pass (DL): 488nm, 550nm, 600nm, 710nm
- Dichroic Short Pass (DS): 615nm, 645nm
- Long Pass (LP): 500nm
- Short Pass (SP): 620nm, 530nm

### Detectors

- Forward Scatter Detector – Solid state detector with patented Fourier design, providing integrated dual collection angle selections
- Side Scatter Detector – High performance photodiode
- Fluorescent Detectors – High performance photomultipliers with spectral sensitivity from 185nm-900nm

### Flow Rates

Continuous pressure is applied to the sample tube based on user-selected flow rates.

- Low, Medium and High

### Sensitivity and Resolution

- Resolves 0.5µm diameter particles from background noise, with maximum detection up to 40µm diameter particles
- < 600 MESF for FITC\*
- < 300 MESF for PE\*
- < 600 MESF for APC\*\*

### Detector Parameters/Data Acquisition

Up to 16 parameters including Auxiliary, Prism, Time and Ratio can be acquired simultaneously from a possible 24 available parameters.

- Forward Scatter – linear, log and peak
- Side Scatter – linear, log and peak
- PMT1-PMT5- linear, log and peak
- One Auxiliary (AUX) signal assignable to any linear or peak signal
- Time
- Ratio (derived parameter)
- Four Decade logarithmic Digital Signal Processing (DSP) of linear FS, SS, FL1-FL5 data

### Throughput and Acquisition Rates

Throughput is linked to various items such as the number of events acquired, flow rate, sample concentration, target population, sampling mode and parameters acquired. Maximum acquisition rate is 3,300 events/sec.

### Sample Handling

Biohazard contained wash station rinses sample probe preventing carryover.

- 12 x 75mm glass or plastic tubes
- Single tube sampling mode
- 32 tube Multi Carousel Loader (MCL)
- The MCL patented design vortexes each tube individually before sample acquisition
- The MCL uses a visible Class II laser reader operating at 670nm with a maximum power output of 1mW, for use with Interleaved 2-of-5, Code 39, Codabar, Code 128 bar codes

Blood Banking  
Centrifugation  
Chemistry  
**Flow Cytometry**  
Hematology  
Hemostasis  
Immunoassay  
Information Systems  
Lab Automation  
Molecular Diagnostics  
Rapid Diagnostics

# FC 500 Flow Cytometer Series

## Carryover

Scatter and fluorescence carryover < 1% when the number of gated events is between 100 and 10,000.

## CXP Software

- Unlimited histogram displays per sample
- Single parameter histograms have 1,024 channel resolution
- Two parameter histograms graphical resolution: 64 x 64, 128 x 128, 256 x 256, 512 x 512 channel resolution
- 256 regions (contour, elliptical, linear, polygonal, quadrant, rectilinear) are available per protocol with up to 32 available for gating regions
- Up to 8 regions can be combined to make a gate
- Real time data analysis and gating
- Real time and listmode compensation using 20-bit data (2<sup>20</sup> channel resolution)
- Storage of both compensated and uncompensated data
- Stop counts available for all histograms
- Auto or User-defined scaling
- Positive analysis for automatically setting regions on control tubes
- User definable statistics
- Single platform absolute counts using FlowCount fluorospheres
- Elliptical autogating with 3 selectable levels
- Contour autogating with 5 selectable levels
- ColorGate Precedence and Color Blend mode color event analysis
- AutoPrime event monitoring during sample acquisition
- Application Definition Wizard for rapid creation of Application Libraries
- Auto Set-Up Wizard for automatically adjusting voltages, gains and color compensation settings
- Application Scheduler for simultaneous multiple application setup
- QuickSET direct visual histogram adjustment of cytometer voltages and gains
- QuickCOMP direct visual histogram adjustment of cytometer color compensation
- Minimal Event Counter for use with rare event collection

- Worklist function for specimen labeling, with positive specimen identification when using barcoding
- Multi-file analysis, including batch automator, listmode compensation, overlay analysis plot, surface and Tomogram displays
- Customizable FlowPage for reporting with automated PDF or printer output
- Full QC Application including Automated Levey Jenning Analysis and IQAP Reports
- FCS 3.0 file format
- Data management for automatic file archival
- Fully compatible with Microsoft Office\*
- Prints directly to PDF files
- Automated Excel\* export functionality

## Optional Software

- CXP analysis software for analysis on a separate workstation
- tetraCXP software
- stemCXP software
- Instrument Manager\*\* bi-directional LIS connectivity

## Operating System

- Microsoft Windows\* 2000

## Workstation

- Pentium\*\*\* 4 3.4 GHz processor (minimum specification)
- System bus 800MHz
- 1GB RAM
- 80GB hard drive (Minimum)
- Dual display video card
- CD/DVD-RW Drive
- DVD speed 16x min

- CD speed 48x min
- Four USB ports, 2 USB controllers
- Integrated Enhanced AC'97 Audio
- Integrated Gigabit Fast Ethernet sdf (Intel 82547)

## Optional Hardware Accessories

- Bar code gun
- Optics filter kit
- Color and black and white printers

## Monitor

- 19" flat screen display (1280 x 1024 maximum resolution)
- Optional monitors available (contact local Beckman Coulter Representatives)

## Installation Requirements

Environmental operating temperature 16°-32° C (60°-90° F)

## Dimensions

Allow sufficient space for ventilation and access for maintenance and service.

### Cytometer

- ~ 30.5 cm (12 in.) from the back
- ~ 45.7 cm (18 in.) from the top
- ~ 30.5 cm (12 in.) on both sides

### Power Supply

- ~ 12.7 cm (5 in.) from the back

## Utility Connections

Four 50/60Hz lines:

- ~ 100VAC, 25A
- ~ 115VAC, 20A
- ~ 220VAC, 15A
- ~ 240VAC, 15A

Component	Height	Width	Depth	Weight
Computer	15.75 cm (6.2 in.)	53.34 cm (21 in.)	42.55 cm (16.75 in.)	18.14 kg (40 lb.)
Cytometer	61.0 cm (24 in.)	90 cm (35.5 in.)	88.9 cm (35 in.)	84.8 kg (187 lb.)
19" LCD	43.7 cm (17.2 in.)	40.6 cm (16 in.)	3.8 cm (1.5 in.)	8.9 kg (19.6 lb.)
Power Supply (Universal)	58.4 cm (23 in.)	45.7 cm (18 in.)	71.1 cm (28 in.)	59.0 kg (130 lb.)

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