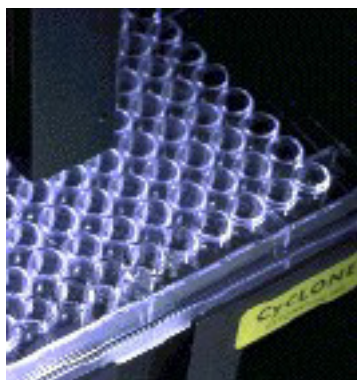




Better Tools. Good Science.



**CyCLONE is a fully integrated component of the MoFlo cytometer that enables precision droplet deposition into a variety of microtiter plate formats. This versatile, fast and easy to use MoFlo accessory helps further automate the sort process.**

## FAST

There's no sense having the fastest commercial sorter in the world and not having the fastest cloning device. CyCLONE is as fast as its name implies: given a 1% population, CyCLONE can fill a 96-well tray with single cells in less than 50 seconds. There's also a positive feedback system (the only one in the industry) so if a plate is not positioned correctly, CyCLONE shuts down the sorting.

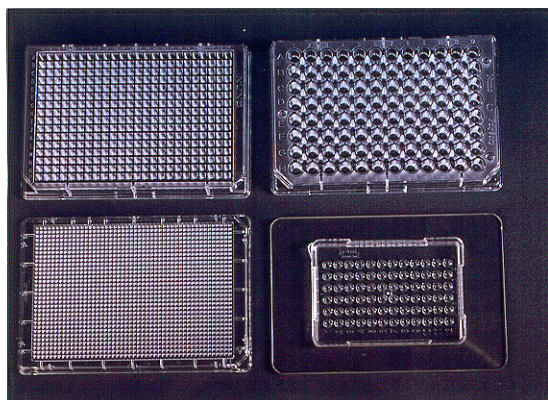
## FLEXIBLE

CyCLONE is permanently mounted to the MoFlo. It is positioned in the Sort Chamber when in use and retracts out of the way when not needed, making the switch from cloning to analysis to regular sorting fast and easy.

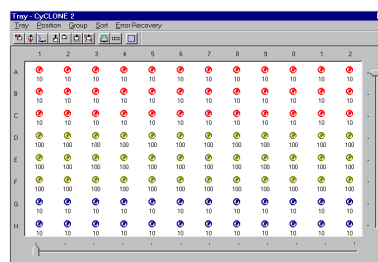
CyCLONE works with any type of slide or multi-well tray (Figure 1). It can even deposit into non-standard well or slide patterns. The operator simply specifies the number of cells per well and the valid sort gate for each well.

## EASY

A graphical representation of the sort geometry in the Summit software makes setup easy and flexible (Figure 2). The operator simply specifies the plate geometry, the number of cells to be deposited in each well and the valid sort gate for each well. Summit then performs the sort and CyCLONE movement automatically. To establish a particular plate geometry, the plate is positioned by clicking with the mouse at the initial and final points. The software calculates the well spacing.



**FIGURE 1.** Four available well trays: 384 well, 96 well, 1536 well and Terasaki 72 well tray with adapter.



**FIGURE 2.** Summit's user interface for CyCLONE is easy to use.

## FUTURE AUTOMATION

The CyCLONE Automated Cloning Device is another module in Cytomation's continuing plan to automate the MoFlo's sort process. Cytomation is unique in employing microprocessor-control for these modules.

These modules are programmable and will be able to communicate with each other to coordinate the sort process, reducing operator exposure to hazardous samples. Cytomation is designing in the power and flexibility necessary for a fully integrated, automated and safe sort.

## CYCLONE TECHNICAL SPECIFICATIONS

<b>CyCLONE includes:</b>	XY Table with robotic arm and motor Motor shroud Cables
<b>Supported Receptacle Formats (Figure 1):</b>	Standard microtiter plate formats including: Terasaki 72 well tray (adapter available from Cytomation) 96 well tray 384 well tray 1536 well tray
<b>Maximum Density of Discrete Droplet Deposition:</b>	1818 rows by 952 columns, for a total of $1.73 \times 10^6$ beads on an Omni Tray (80mm x 120 mm)
<b>Positioning Accuracy:</b>	$\pm 2.5 \mu\text{m}$ on x-axis and y-axis
<b>Velocity and Acceleration:</b>	2,600 steps per second (velocity) and 150 steps per second (acceleration)
<b>Droplet Deposition Accuracy:</b>	Standard deviation of $126.27 \mu\text{m}$ on the x-axis and $43.541 \mu\text{m}$ on the y-axis

Cytomation, Inc. is a privately held bio-technical instrumentation corporation specializing in high-performance, high-speed flow cytometer analyzers, sorters and upgrades. Our mission is to design, produce, and service the finest flow cytometers and cell sorters in the world — unparalleled in performance, accuracy, versatility, reliability and speed. MoFlo, our premier flow cytometer, is a modular system that is easily upgraded whenever requirements change or new modules become available.

### North America

Cytomation, Inc.  
4850 Innovation Drive  
Fort Collins, CO 80525  
USA  
Telephone: 970.226.2200  
Facsimile: 970.226.0107  
E-mail: [info-northamerica@cytomation.com](mailto:info-northamerica@cytomation.com)

### Europe

Cytomation Bioinstruments GmbH  
Engesserstrasse-4  
79108 Freiburg im Breisgau  
Germany  
Telephone: 49.761.559.7370  
Facsimile: 49.761.559.7375  
E-mail: [info-europe@cytomation.com](mailto:info-europe@cytomation.com)

### Australasia

Cytomation PTY LTD  
60-66 Hanover Street  
Fitzroy, Vic 3065  
Australia  
Telephone: 613.9417.4577  
Facsimile: 613.9417.2987  
E-mail: [info-australasia@cytomation.com](mailto:info-australasia@cytomation.com)