

Cytonome Hydris™ System Product Technical Specifications

Cell Types	<ul style="list-style-type: none"> • Mammalian • Additional cell types possible (i.e.- yeast, bacteria)
Sample Concentration	• 1,000 to 100 million cells per ml (cell type dependent)
Sample Flow Rate	• 4 ml per hour (three 12 x 75 mm tubes as input)
Cell Measurement Parameters	<ul style="list-style-type: none"> • Light scatter, Phycoerythrin (PE) emission (standard) • Additional fluorescence wavelengths possible
Cell Analysis Rate	• Up to 1 billion cells per hour
Cell Purification Rate	• Up to 300 million cells per hour (depending upon your application)
Sort Collection Vessels	<ul style="list-style-type: none"> • 1.5 ml, 5 ml, 15 ml, 50 ml tubes; cell culture flasks • Other collection devices possible
Sort Purity	• > 99%
Biohazard Containment	• Optional biological safety cabinet and aerosol evacuation systems
Sort Technology	• Microdroplet sorting
Flow Cell Type	<ul style="list-style-type: none"> • Ceramic tip, 70 micron orifice (standard) • Optional disposable polymer tips
Laser Wavelength	<ul style="list-style-type: none"> • 488 nm (blue) (standard) • Additional laser wavelengths available
Optical Detection	• Photomultipliers
Sensitivity	• < 250 molecules of equivalent fluorescein
Signal Dynamic Range	• 1 to 50,000 (4.5 orders of magnitude)
Connectivity	<ul style="list-style-type: none"> • Ethernet (1 per sort unit) • Remote monitoring and control
User Alerts	• Sort status, run errors
Dimensions	• 122.0 cm x 89.0 cm x 204 cm (48 in x 35 in x 80 in)
Facility Requirements	• Single 110/240V AC outlet, compressed gas, vacuum

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CYTONOME HYDRIS™

Cell Sorting System



Cytonome Hydris™ Cell Sorter

PRODUCT BENEFITS

- > **Multiple sorters in a single instrument**
- > **High throughput with reduced instrument size**
- > **Simplified operation**
- > **Flexible configuration**
- > **Industrial scalability, reliability and productivity**
- > **Automation ready**

Introducing the Cytonome Hydris™ high throughput cell purification system

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The Cytonome Hydris™ system

is a customizable, high throughput cell purification platform that combines multiple cell sorters into a single compact workstation. Each Hydris™ system is built to meet your specific application requirements with a choice of lasers, detectors, filters and software interface options. The system is highly automated and designed around your needs, providing simplified operation, reduced instrument size and lower cost in a streamlined workstation layout. The Hydris™ system is ideal for routine and repetitive cell selection tasks such as industrial-scale and lean-manufacturing cell production, sorting of GFP expressing cells or purification of rare cell populations.



MULTIPLE SORTERS IN A SINGLE INSTRUMENT

The Hydris™ system utilizes a compact proprietary multi-sorter design. Each of up to 3 sort units can be operated independently or used together to achieve a higher overall sort rate. Since each sorting unit is independent, interruption of any individual sorting unit will not affect the remaining sorting units. A single person can easily operate one or more Hydris™ sorting units or complete systems, due to the compact size, built-in instrument automation and advanced real-time alert capabilities of the instrument.

SIMPLIFIED OPERATION

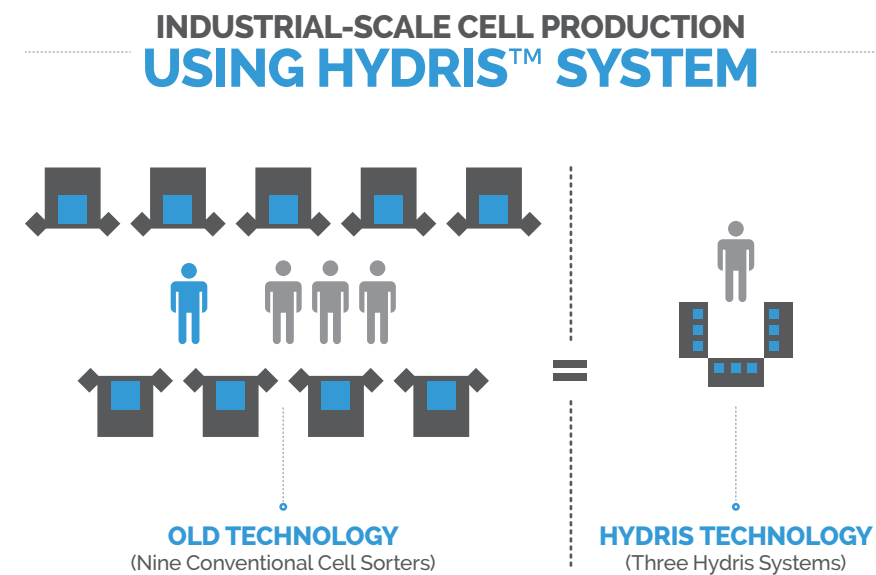
The Hydris™ system has been designed to simplify your life. The Hydris™ cell sorting system is operated via a touchscreen and can be remotely accessed and controlled over the Internet. Control settings (i.e., alignment, droplet setup and droplet delay) are highly automated and require minimal user intervention. The operator can easily control each independent sorting unit using the built-in sort monitoring functions and real-time displays. These capabilities provide ease-of-use in busy, high throughput sorting facilities, particularly when running in a 24/7 environment.

HIGH THROUGHPUT WITH REDUCED INSTRUMENT SIZE

The Hydris™ system, with its multi-sorter design, has the fastest overall sort rate of any conventional high-speed cell sorter of its size. Sort up to 300 million cells per hour (from up to 1 billion cells per hour) depending upon your application. Dedicated sort electronics ensure stable, accurate, high-speed sorting across multiple sorting units. The system is perfect for use in facilities where space is limited and additional sorting capacity is needed.

FLEXIBLE CONFIGURATION

The Hydris™ system provides a flexible platform with "build-to-order" configurability through the Cytonome Custom Configuration Program. Choose from 1 to 3 sorting units, along with your choice of lasers, filters and detectors. Optional biosafety cabinet integration and aerosol evacuation units can be provided for safe sorting of biohazardous material. The user interface has been designed with ease of use in mind and can be custom configured to minimize operator training in environments with repetitive cell selection tasks. The modular design of the Hydris™ system allows you to choose the configuration that best suits your needs for today and tomorrow.



TECHNICAL DIAGRAM LEGEND

Conventional Cell Sorter (1 Sort Unit)	Supervisor
Hydris™ System (3 Sort Units)	Lab Technician

INDUSTRIAL SCALABILITY, RELIABILITY & PRODUCTIVITY

The Cytonome Hydris™ system provides exceptional value along with unmatched speed, purity and sensitivity. With its multi-sorter capabilities, custom electronics and built-in sort monitoring functions, Hydris™ technology allows you to easily and repeatedly separate cells at an industrial scale and reliability. True walk-away sorting is supported with minimal downtime. The space saving features of the Hydris™ system improve your productivity by allowing a single operator to monitor a larger number of sorting and cell production operations. Lower your equipment, labor and facility costs by substituting multiple cell sorters with a single higher-throughput Hydris™ system.

HIGHLIGHTS

- > **Multiple sorters in a single instrument**
Up to 3 independent cell sorters can be placed in one instrument.
- > **High throughput with reduced instrument size**
Perfect for use in facilities where space is limited and large scale sorting capacity is needed.
- > **Simplified operation.**
Highly automated system with built-in sort monitoring functions.
- > **Flexible configuration**
"Build-to-Order" configurability through the Cytonome Custom Configuration Program, with choice of 1 to 3 sorting units, lasers, filters, detectors and user interface options.
- > **Industrial scalability, reliability and productivity**
Separate cells at an industrial scale and reliability, while lowering your overall costs.
- > **Automation ready**
Supports automated sample loading and diverse output formats.

AUTOMATION READY

Due to the flexible architecture of the Hydris™ system, the instrument can be readily adapted to support automated sample loading and diverse output formats. The system can be integrated with liquid handling and other robotic systems depending upon your needs.