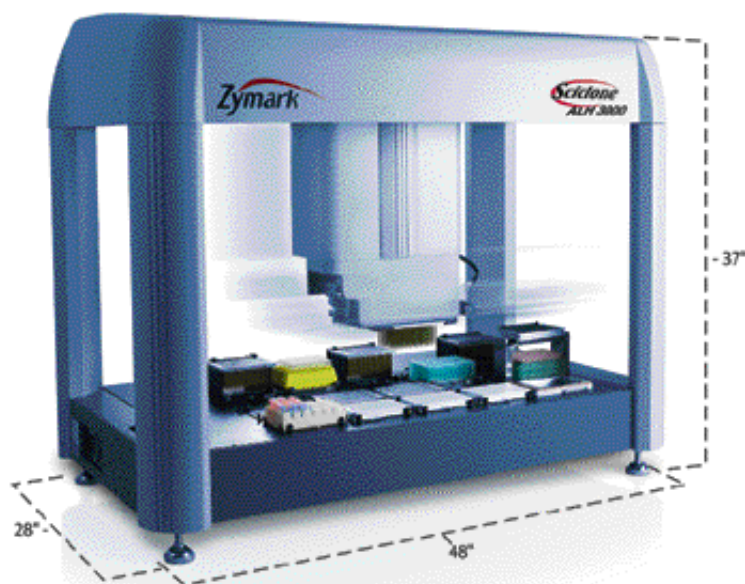


Sciclone ALH 3000 Advanced Liquid Handling System

Technical Specifications



The Sciclone ALH 3000 Advanced Liquid Handling system delivers highly accurate and precise liquid handling in a versatile, scalable open-design format. With the flexibility to adapt as your needs change, it is an ideal tool for automating virtually any genomic, proteomic or drug screening protocol.

Key features include:

- Swap on-the-fly 96 and 384 fixed cannula arrays, disposable tip arrays and pin tools.
- Z-8™ dispense module with independent Z-axis control for single well access and liquid level sensing.
- Up to six independently programmable bulk reagent dispense modules.
- Powerful easy-to-use software.
- 20 position deck and access from all four sides for easy integration.

Liquid Handling Performance

Dispense Module	Volume Range	Characteristic Performance*	Tip Options
ALH-HV Module (96 channels)	1-200 μ l	1-5 μ l: CV < 5% 5-200 μ l: CV < 2%	100 or 200 μ l disposable tips
ALH-LV Module (384 channels)	0.5 - 25 μ l	0.5 - 2 μ l: CV < 3% 2-25 μ l: CV < 2%	96, 384 deep, or 384/1536 fixed cannula arrays 96 or 384 mandrel arrays for disposable tips Custom V&P Scientific Pin tools
ALH -NL Module (384 channels)	0.1 - 5.0 μ l	0.1 - 0.5 μ l: CV < 6% 0.5 - 5 μ l: CV < 2%	96, or 384/1536 fixed cannula arrays Custom V&P Scientific Pin tools
Z-8 Dispense Module (8 channels with independent Z-axis control)	1-100 μ l with disposable tips	1-5 μ l: CV < 5% 5-100 μ l: CV < 3%	100 μ l disposable tips
	1-50 μ l with fixed cannula	1-2 μ l: CV < 3% 2-50 μ l: CV < 2%	50 μ l fixed cannula
Bulk Dispense Module with Syringe Pump (8 fixed channels)	10-2,500 μ l	10-20 μ l: CV < 3% 20-2,500 μ l: CV < 2%	Fixed cannula module

*Based upon Zymark application studies using liquid to liquid dispense methods with either water or DMSO & tartrazine dye. Application notes available upon request.

Sciclone ALH 3000 Liquid Handling System - Technical Specifications

Dimensions

Height: 37 in 94 cm Width: 48 in 122 cm Depth: 28 in 71 cm

Weight

345 lbs. (157 kgs.)

Worktable Data

- 20 microplate positions
- 8 deck holes for recessed accessories (columns 4 and 5)

Electrical Requirements

50/60 Hz 120-240V, 10 amp

Robotic Positioning

- Bi-directional repeatability:
- X-axis +/- 20 micron
 - Y-axis +/- 20 micron
 - Z-axis +/- 20 micron

System Communications

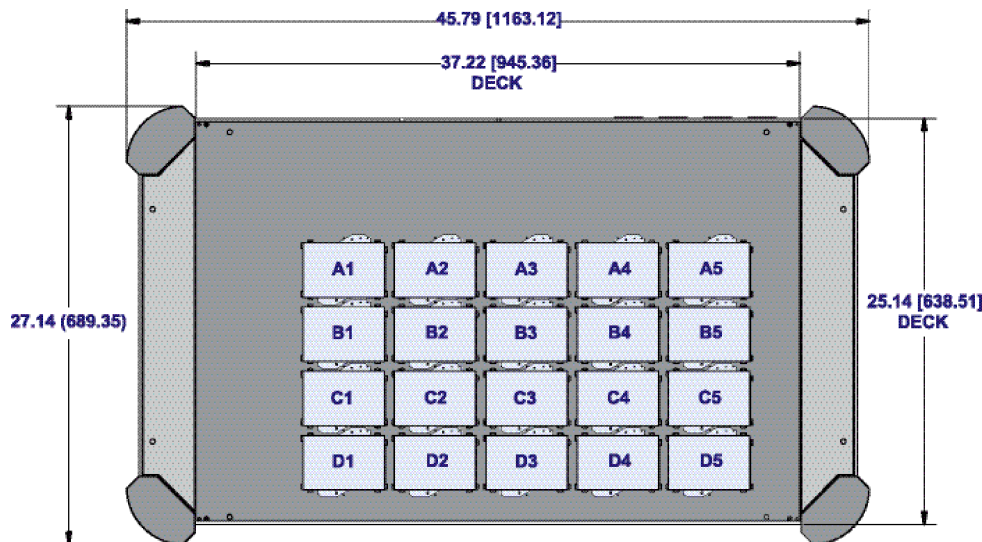
24V I/O

Pneumatic Requirements

Oil-free, dry air at 60 -70 psi recommended

Regulatory Ratings

CE Compliant



Sciclone ALH 3000 Controller

Hardware

- 2GHz Minitower (17.5" h x 8.1" w x 17.2" d)
- 512Mb RAM
- 20GB Hard Drive
- CD-RW
- 3.5" Floppy Drive
- 56k Modem
- 15" Flat Panel Display Monitor

I/O Ports:

- 6 USB
- 3 Serial RS232
- 1 Parallel
- 2 PS/2

Software

- Windows 2000 SP2 or greater, Microsoft® Office Professional, Sciclone 3.0 Software or higher

Accessories

Microplate Shaker

100-2000rpm with 2mm self-centering motion
Occupies one above deck location (<40mm height)

Temperature Controlled Locator

100-240V, 50/60 Hz
Temperature range: 4 - 45° C
Occupies one recessed deck location.

Standard Reservoir - Teflon coated
(Max volume: 200ml, Min volume: 10ml)

Adapters for holding 96 & 384 well PCR plates and flat bottom microplates

Positive Pressure Filtration Unit

100-240V, 50/60Hz
Pressure controller: 0-15psi manual adjustment
Swap on the fly Pressure Manifold
Occupies one recessed and one above deck location.

Piercing Array

96 piercing cones for piercing foil based plate sealers
Swap on the fly spring mounted array. Occupies one above deck location

Ultrasonic Wash Station

100-240V, 50/60Hz
Independent on-line fill and drain pumps
Fill volume: 350ml
Occupies one recessed deck location.

Fixed Cannula Arrays & Mandrel Arrays

Array Type:	Length (protruded)	Diameter at Tips		External Coating
		Outer	Inner	
96 Cannula Array for ALH-LV Head	1.69"	.050"	.015"	Teflon
384 deep Cannula Array for ALH-LV Head	1.69"	.050"	.015"	Teflon
384/1536 Cannula Array for ALH-LV Head	1.35"	.030"	.015"	Teflon
96 Cannula Array for 100nl Head	1.06"	.030"	.018"	Teflon
384 Cannula Array for 100nl Head	1.06"	.030"	.018"	Teflon
Z-8 Cannula	1.88"	.050"	.015"	Teflon
96 Mandrel Array for ALH-LV Head	1.31" w/Tips .20" w/o Tips			None
384 Mandrel Array for ALH-LV Head	1.31" w/Tips .20" w/o Tips			None

