

Nexus 96/384

Semi-Automated Pipettor



Intelligent, Fast, Affordable

Nexus 96/384

Intelligent, Fast, Affordable Lab Assistant

MFL designed Nexus 96/384 for speed, accuracy and ease of use. By understanding how researchers work and how high-throughput pipetting fits into a lab's overall workflow, we designed Nexus 96/384 to deliver extraordinary accuracy and precision, with exceptionally good ergonomics and requiring virtually no training.

- One machine & Six Pipetting modules– Nexus 96/384 can easily change modules in 10 seconds. Each module has different volume ranges. 0.5-24 μ L range has two formats, 96 channels and 384 channels
- Four volume ranges –0.5-24 μ L, 1-50 μ L 5-240 μ L 10-900 μ L, Each module offers excellent accuracy and precision.
- Simultaneous 96-well and 384 pipetting – compared to single- and multi-channel pipettors, Nexus 96/384 fills 96 wells and 384 wells in a single pass, and virtually eliminates the risk of skipping or repeating wells.
- Versatile for different applications – validated in most common life science applications, Nexus 96/384 accelerates experiments like cell seeding, ELISA and qPCR without sacrificing data quality.
- Reliable and affordable – manufactured by MFL(ISO9001) to exceptionally high quality and performance standards. Nexus 96/384 is priced well within the budget of every research project.



Pipetting Head and Tip Overview

Volume range [μ l]	0.5-24ul	0.5-24ul	0.5-24ul	1-50ul	1-240ul	5-850ul
Head format	96	96	384	96	96	96
Pipetting Head cat number	N96H24	N96H24B	N384H24	N96H50	N96H240	N96H850
Rack tip sterile Cat Number	T96-24	T96-24B	T384-24	T96-50	T96-240	T96-1000
Reload tip sterile cat Number	R96-24	R96-24B	N/A	N/A	R96-240	R96-1000
Bulk tip Cat Number	B96-24	N/A	N/A	T96-50	N/A	N/A

Specification

Test volume (μ l)	1	12	24	1	12	24	1	12	24	5	25	50	10	120	240	10	400	850
Accuracy (%)	3.5	3	2	9.6	2	2	3	2	2	3.6	3	2	3.8	3	2	5	3	2
Precision (%)	2.9	1.8	1.5	7.8	1.6	1.5	2.5	1.6	1.5	3.1	1.8	1.5	2.9	1.8	1.5	3.5	1.8	1.5

Features & Innovation

➤ Space saving footprint

Two plate holders compact design requires little space on a lab bench and easily fits into laminar flow hoods to allow work under sterile conditions. Moving the light weight plate holders switches the pipetting positions, instead of moving the heavy head.



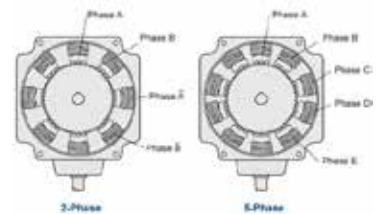
➤ Intuitive operation

MFL's free Apple app software can provide various intelligent applications: aspiration, dilution, sequential dispensing and multi-dispensing. The APP Also allow you to set individual parameters for aspiration or dispensing speeds to match your current liquid class. Workflow program can be saved under user name for quick programming



➤ 5-phase stepper motor

Nexus 96/384 uses Oriental Motor's class leading 5-phase stepper motor. The motor offers higher resolution, lower vibration, higher acceleration and deceleration rates (due to smaller step angles), and are less likely to lose synchronization due to overshooting/undershooting than a 2-phase stepper motor. For applications requiring high precision, low noise and low vibration, 5-phase is the better technology.



➤ Patent pending pressure sensor guides the Z-Axis

Nexus 96/384 allow you to Press the sensor handle to guide the Z-Axis moving. High resolution patent pending sensor design could sense your pressure level to adjust the Z-Axis speed. Also the pressure sensor working the software, can measure the plate height if you are using some plate which does not have the dimension detail



➤ Tip Nozzle can be individually changed by User

Each Module of Nexus 96/384 will have 96 or 384 nozzles. Nozzle could be broken easily if it is not used properly. You do not need to pay hefty amount to buy a new one. Instead, you could buy the new nozzle and tools to change the broken or worn out nozzle by yourself with reasonable cost.



Highlight Features of Nexus 96/384

The newly designed Nexus 96/384 combines all the best features into one instrument.

1. motorized automated z-axis movement
2. remote control interface
3. easily exchangeable pipetting mechanisms
4. pressure sensor guiding z-axis movement to automate recallable consumable height measurement

Nexus 96/384 redefines "AFFORDABLE"

You can buy Nexus 96/384 with 3 pipetting mechanisms at a price less than or equal to any instrument with just one pipetting mechanism.

Robotic consumables used with Nexus 96/384 is very reasonably priced thus reducing the cost of using Nexus 96/384.

Flexible purchasing program options

If your annual tip consumable usage is very high, MFL offers instrument give-away programs and consumable rental programs based on your tip usage. You just buy the tips, MFL gives you the instrument for free! Contact us for details.

Control unit Apple® iPod®

High quality touch screen for convenient system control.

Accessible by other iOS 7 devices (iPhone®, iPod®) via WiFi

Compact design

Small footprint, fits under laminar flow hood and can be easily moved between labs

Pressure sensor guides the Z-Axis

Nexus 96/384 uses a unique pressure sensor lever technology to guide z-axis movement for the perfect software recallable consumable height and well depth measurements.

Design



One touch Tip Design

Minimal force needed to attach tips to the 96 nose-cone array for ergonomic operation

X-Axis sliding

Easily move the plate carrier through x-axis to switch position A to position B

Dividing rule maker

For serial dilution application, compatible to 96 well plate and 384 well plate

Application

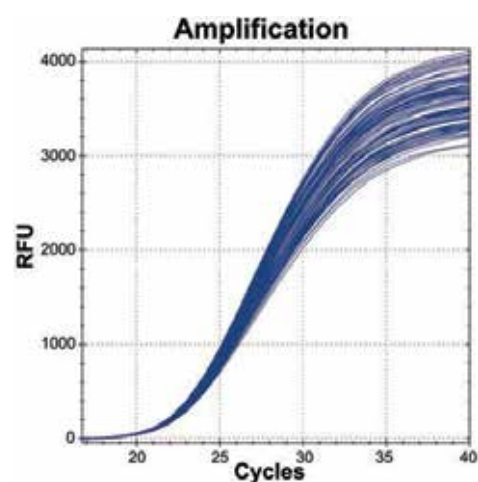
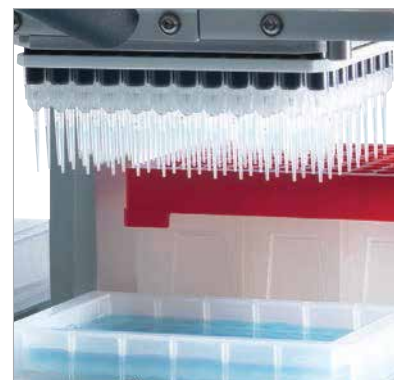
► Sample-Prep Automation in NGS

The NGS protocol will need to be industrialized, which will require identifying and eliminating bias and errors in assays. Major productivity gains, including reducing systematic bias, can occur by improving sample handling during sample preparation.. One way to minimize bias is to improve sample preparation and handling.

Automating the preanalytic phase can bring productivity gains to next-generation sequencing service laboratories. Scaling up to industrial levels will require the consistency and tracking that only automation can provide. Automation enables sample-prep runs to happen overnight, so gDNA can be ready for the sequencer in the morning.

This summer the American College of Medical Genetics published guidelines for clinical NGS and attempted to establish standards. Automation for sample prep is a way to solve many of these challenges while improving productivity and saving reagent costs.

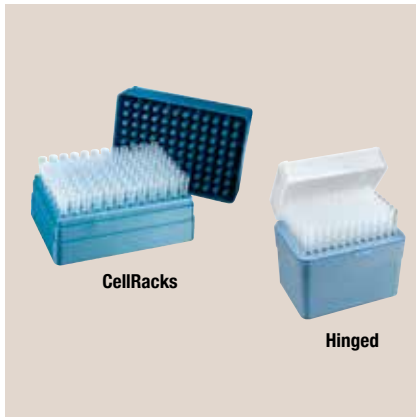
MFL provide a whole system for NGS. The solution could handle 200 samples a day from raw sample to being ready for the sequencing.



Technique	What Nexus 96/384 can achieve
ELISA	Add and remove reagents quickly, equal to one Multidrop® and a 96 Washer
Cell lysis	With correct reagents, break cells via pipetting for up to 96 samples
PCR and qPCR	Easily pipette PCR/qPCR template into 96-well plates with one pipetting
Luminex® assays	Add buffers, antibodies and other solutions consistently to Luminex® plates
Sequencing sample prep	Dispense buffers, enzyme and nucleic acids in parallel
Sequencing sample clean-up	Speed precipitations and purification with 96-channel pipetting
Standard enzymatic assays	Pipette enzyme, buffer, and substrate into plates accurately and precisely
Cellular culture set-up	Create mother-daughter plates in seconds
Cellular culture siRNA treatment	Easily and accurately pipette siRNAs into culture plates
Drug compound screening	Speed and accuracy adding cells, biomolecules and compounds to 96/384-well plates
Protein crystallography	Quickly dispense buffers to plates for hanging drop method

Luminex is a registered trademark of Luminex Corporation, Multidrop® is a registered trademark of ThermoFisher Inc.

Related Consumables and Accessories



High quality tip with different package: rack tip, reload tip, bulk tip



Reload tip with space saving and environment friendly feature



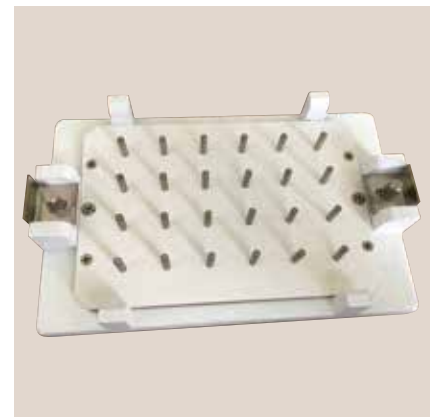
Corning Onetouch Tip rack adaptor (Non-SBS adaptor)



384 Adaptor (When using 96 Tip for 384 Plate)



SBS Reservoirs: 1,4,8,12 channels (1 channel: 96 V bottom and 384 V bottom)



Magnetic Plate

Corning OEM word class robot tip for Nexus 96

Corning special design the One-touch robot tip for Nexus 96 to achieve the top performance. One-touch tip features long fine tip and robber like sealing part attaching to nozzle. One-touch tip has the world best sealing performance without huge pressure force.



Specification

Specification	
Channels	96/384
Pipetting technology	air displacement
Compatible plate formats	All SBS Plates
Dimensions (W x D x H) Weight	42 cm x 30 cm x 54 cm (17" x 12" x 21")
Operating conditions	Temperature: 2°C - 45°C, Humidity: < 90%
Power requirements	120W, 110 - 240 VAC, 50/ 60 Hz

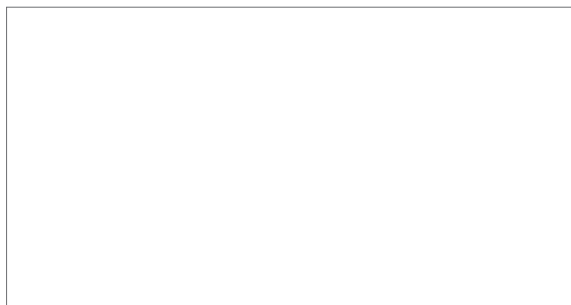
Instrument

Product Name	Cat. No.
Nexus 96 Semi-automated Pipettor	N961001
Nexus 96 Semi-automated Pipettor(OEM version)	N961002

Product Name	Cat. No.
Pipette module 96 Channels 0.5-24ul Type A	N96H24
Pipette module 96 Channels 0.5-30ul Type B	N96H24B
Pipette module 96 Channels 0.5-24ul (Corning)	N96H24C
Pipette module 384 Channels 0.5-30ul	N384H24
Pipette module 96 Channels 1-50ul	N96H50
Pipette module 96 Channels 5-240ul	N96H240
Pipette module 96 Channels 5-240ul (Corning)	N96H240C
Pipette module 96 Channels 10-850ul	N96H850

Accessory

Product Name	
384 plate holder	N962101
Corning tip holder I	N962102
Corning 24ul and 240ul tip reload holder	N962103
Corning 1250ul reload tip holder	N962104
ipod touch 6	N962105



Consumable

Product Name	Cat. No.
24ul Type A Tip Rack Sterile, 96tip/rk, 50rk/cs	T96-24
24ul Type A Reload Tip Rack Sterile, 96tip/rk, 50rk/cs	R96-24
24ul Type A Bulk Tip, 1000tip/bg, 10bg/cs	B96-24
30ul Type B Tip Rack Sterile, 96tip/rk, 50rk/cs	T96-24B
30ul Type B Reload Tip Rack Sterile, 96tip/rk, 50rk/cs	R96-24B
30ul Type B Tip Rack Sterile, 384 tip/rk, 50rk/cs	T384-24
50ul Tip Rack Sterile, 96tip/rk, 50rk/cs	T96-50
50ul Bulk Tip, 1000tip/bg, 10bg/cs	B96-50
240ul Tip Rack Sterile, 96tip/rk, 50rk/cs	T96-240
240ul Reload Tip Rack Sterile, 96tip/rk, 50rk/cs	R96-240
1000ul Tip Rack Sterile, 96tip/rk, 50rk/cs	T96-1000
1000ul Reload Tip Rack Sterile, 96tip/rk, 50rk/cs	R96-1000
Corning 24ul Onetouch Tip Rack Sterile, 96tip/rk, 50rk/cs	10310
Corning 24ul Onetouch Tip Rack Non-Sterile, 96tip/rk, 50rk/cs	10300
Corning 240ul Onetouch Tip Rack Sterile, 96tip/rk, 50rk/cs	73760
Corning 240ul Onetouch Tip Rack Non-Sterile, 96tip/rk, 50rk/cs	73750
96 Reservoir PP 50/cs	R310001
384 Reservoir PP 50/cs	R310002
12 Channel Reservoir PP 50/cs	R310003
8 Channel Reservoir PP 50/cs	R310004
4 Channel Reservoir with Adaptor	R310005
96 Reservoir PS 100/cs	R310011

Brookline Scientific INC

China: 188 Xinjunhuan Road, Building 2 Floor 4, Minhang District, Shanghai
USA: 116 Will Drive, Canton MA 02021 info@machineforlab.com