

Nanodrop Express

Innovadyne Technologies introduces the 16-channel **Nanodrop™ Express**, our fastest benchtop system -- a complete high-throughput solution for low volume, high-precision pipetting. The Nanodrop Express doubles the dispense capacity and halves the aspirate time of a Nanodrop II. The Nanodrop Express can be configured with one- or two-plate stage modules, and interchangeable 1x16 or 2x8 tip heads specialized for reagent dispensing and 96-to-384 transfers, respectively. For reagent addition, 8 individual tips can access any well of a standard SBS plate, enabling complex method development and design.



The Nanodrop Express aspirates and dispenses a broad range of liquids, including DMSO, and features the Nanobuilder© software system that enables a wide range of applications and data manipulation. Innovadyne's patented technology isolates the solenoid dispense actuators from the sample path. This assures long life and easy, low-cost maintenance, even with regular use of difficult suspensions such as proteins, cells and YOx beads.

Features

- Non-contact and contact dispense
- Exceptional dynamic range (nanoliter to milliliter)
- Interchangeable 1x16 tip (for reagent dispensing and 384+ well plates) and 2x8 tip (for 96-to-384 transfers) heads
- Multiple reagent addition
- Aspirate and dispense with individual channel articulation
- Sample transfer and bulk reagent addition on the same platform
- Valve-free fluid path for outstanding reliability
- FEP, SS, sapphire wetted parts compatible with commonly used solvents
- 96-, 384-, and 1536-well plate formats; deep-well and crystal plates supported
- Modular, raised, removable plate nests enable flexible configuration
- 1-plate nest and 2-plate nest stages available
- Easy to program, easy to automate
- Simple cleaning and maintenance

Applications

HTS

- Fast reagent additions
- Bulk reagent addition

Cell-based Assays

- Cell plating
- Cell dosing

Bead-based Assays

- Bead manipulation
- Reagent additions

Protein Crystallography

- Coarse and fine screen creation
- Mother liquor transfers
- Protein additions

PCR

- Template transfers
- Cocktail additions

Performance Specifications

Specification	Value
Plate Formats	96, 96 deep well, 384, 384 deep well, 1536, 1536 low profile, crystallography plates (Note: 96-well plates require the 2x8 head)
Plate Positions	1 or 2
Return to Spot Accuracy	0.1 mm
Dispense Functions	Compound transfer (contact/non-contact), single tip reagent addition, 8-tip reagent addition
Aspirate Modes	All the same volumes, independent
Dispense Modes	All the same volumes, independent
Aspiration Range	0.1 - 500 μ L
Dispensing Range	0.1 - 80 μ L (non-contact) 25 - 500 μ L (contact)
Dispensing Precision	CV \leq 10% at 100 nL CV \leq 7% at 200 nL CV \leq 5% at 1 μ L
Dispensing Accuracy	\pm 10% at 100 nL \pm 7% at 200 nL \pm 5% at 1 μ L
Dead Volume	1.44 μ L/channel at 1 μ L across 384-well plate
Syringe Capacity	500, 1000 μ L
Cycle Time	10 s/transfer (*2 reagent addition and 384/1536 1 reagent addition times forthcoming**)

Technical Specifications

Dimension	Fluidics Module	1-Plate Stage Module	2-Plate Stage Module
Height	33.0 cm (13 in)	32.3 cm (12.7 in)	32.3 cm (12.7 in)
Width	56 cm (22 in)	24.6 cm (9.7 in)	24.6 cm (9.7 in)
Depth	44.5 cm (18 in)	37.5 cm (14.75 in)	53.6 cm (21.1 in)
Weight	22 kg (50 lb)	11.3 kg (25 lb)	13.4 kg (29.5 lb)

Environmental	10 to 40°C, 80% RH
System Gas	Standard grade helium (99.7% pure)
Dispense Tips	304 SS, sapphire
Reagent Trays	Custom, deep well plates
Interface	Ethernet, Nanobuilder software GUI
Automation Control	Nanobuilder component library

Configuration Options

Part No.	Description
12043	Nanodrop Express fluidics module (required)
11460	1-plate stage module
11245	2-plate stage module
-	1x16-tip head
-	2x8-tip head