

# Innovadyne™ Screenmaker 96+8™

The Innovadyne Screenmaker 96+8 offers both high-throughput liquid transfers and reagent additions on one integrated platform. Its unique combination of a 96-channel, non-contact dispense head coupled to an 8-channel, noncontact/contact dispense capability facilitates a variety of screening applications from HTS to protein crystallography.

## Non-contact Dispense Technology

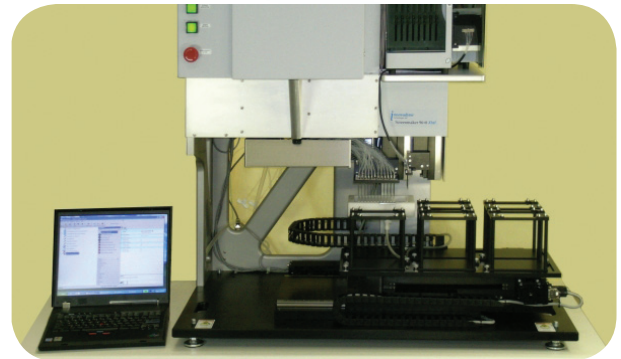
Like the Nanodrop™, the Screenmaker 96+8 incorporates non-contact dispense technology, coupled with traditional syringe dispensing. The result is a next generation workstation, making possible the dispensing of reagents of widely varying viscosity across a broad volume range with excellent precision and accuracy.

## Customized Liquid Handling

Individual control of each channel allows customized liquid handling on a per well basis for applications such as normalization, dispensing of gradients, multiplexing, and the dispensing of unique plate maps such as molecular diagnostic assays. The product features the Nanobuilder software system that enables a wide range of applications and data manipulation.

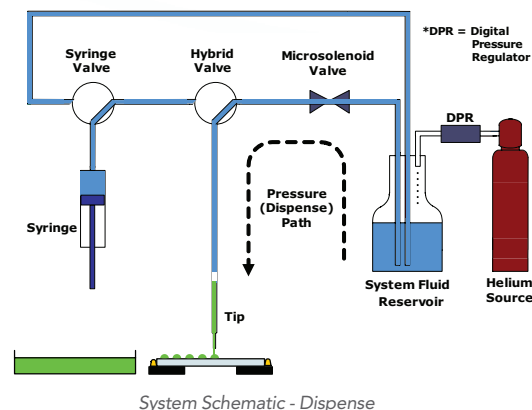
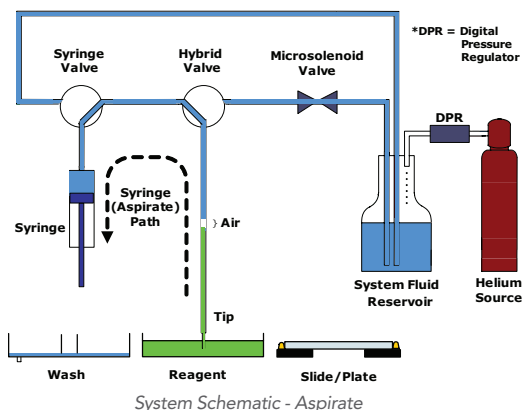
## Features

- ▶ Non-contact and contact dispensing on one platform provides flexibility to address applications with the best liquid handling method
- ▶ Exceptional dynamic range (nanoliters to milliliters) allows users to use the same device at multiple assay volumes
- ▶ High-speed delivery of reagents for time-sensitive assays provides greater precision
- ▶ Fast, rigorous wash of all tips simultaneously saves valuable time
- ▶ Individual volume per channel for all channels
- ▶ Isolation of moving parts from sample path helps solve reliability issues seen with in-line actuators
- ▶ Easy installation and maintenance



## Applications

- ▶ Protein Crystallography
  - ▶ Coarse and fine screen creation
  - ▶ Sitting drop, hanging drop, and microbatch supported
  - ▶ Mother liquor transfers
  - ▶ Protein additions
- ▶ HTS
  - ▶ Sample Transfer
  - ▶ Reagent Addition
- ▶ Cell-based Assays
  - ▶ Cell plating
  - ▶ Cell dosing
- ▶ Bead-based and Membrane-based Assays
- ▶ PCR
  - ▶ Template transfers
  - ▶ Cocktail addition
  - ▶ Normalization of DNA



### Performance Specifications

| Specification           | 96-Tip Head  | 8-Tip Head   |
|-------------------------|--|--|
| Plate Formats           | 96, 96 deep well, 384, 384 deep well, 1536, 1536 low profile, and crystallography plates | 96, 96 deep well, 384, 384 deep well, 1536, 1536 low profile, and crystallography plates   |
| Plate Positions         | 5  | 4  |
| Return to Spot Accuracy | 0.1 mm   | 0.1 mm   |
| Dispense Functions      | 96-tip transfer via contact or non-contact, and reagent addition (non-contact)           | Transfer (contact/non-contact), single tip reagent addition, and 8-tip reagent addition  |
| Dispense Modes          | All the same volumes or independent volumes  | All the same volumes or independent volumes  |
| Aspiration Range        | 0.1 - 125 $\mu$ L  | 0.1 - 500 $\mu$ L  |
| Dispensing Range        | 0.1 - 125 $\mu$ L  | 0.1 - 40 $\mu$ L (non-contact)<br>25 - 500 $\mu$ L (contact)   |
| Dispensing Precision    | CV < 12% at 100 nL<br>CV < 10% at 200 nL<br>CV < 5% at 1 $\mu$ L                         | CV < 10% at 100 nL<br>CV < 7% at 200 nL<br>CV < 5% at 1 $\mu$ L  |
| Dispensing Accuracy     | $\pm$ 10% at 100 - 500 nL<br>$\pm$ 5% at >500 nL   | $\pm$ 10% at 100 nL<br>$\pm$ 7% at 200 nL<br>$\pm$ 5% at >1 $\mu$ L  |
| Dead Volume             | <1 $\mu$ L/channel   | 1.44 $\mu$ L/channel at 1 $\mu$ L across 384-well plate  |
| Syringe Capacity        | 500, 1000 $\mu$ L  | 500, 1000 $\mu$ L  |
| Cycle Time              | 180 s/transfer (includes wash)   | 20 s/transfer, <60 s with 1 $\mu$ L reagent addition (single tip/96-well plate), <17 s 1 $\mu$ L reagent addition (8-tips/1536-well plate) |

### Technical Specifications

|                           |  |
|---------------------------|--|
| <b>Dimensions</b>         | 102 cm (40 in) Height, 107 cm (42 in) Width, 63.5 cm (25 in) Depth, 203 kg (448 lb) Weight |
| <b>Environmental</b>      | 10 to 40 $^{\circ}$ C, 80% RH  |
| <b>System Gas</b>         | Standard grade helium (99.7% pure)   |
| <b>Dispense Tips</b>      | 304 SS, sapphire   |
| <b>Reagent Trays</b>      | Custom, deep well plates   |
| <b>Interface</b>          | RS-232, Nanobuilder software   |
| <b>Automation Control</b> | Screenmaker Automation Control   |

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