

synQUAD[™] Technology

Fast. Non Contact. Aspirate and Dispense Systems.



synQUAD's PreSys 4040XL with 8 Channel Dispense Head

The proprietary **synQUAD technology** was developed for high speed dispensing. The technology involves (1) the coupling of a high-speed microsolenoid valve with a high-resolution syringe pump and (2) synchronization of the dispense system with the translation stage. The result is an **extremely fast dispensing system**, which can deliver volumes from 20 nL to 20 μ L with true "on the fly" dispensing. **synQUAD technology** can work in either an aspirate/dispense configuration

or bulk dispense mode. **synQUAD** dispensing platforms are ideal for addition of reagents to assay plates containing compounds for investigation. Use **synQUAD** to add buffers, receptors, enzymes and cells. **synQUAD** systems also provide aspirate and dispense capability. Using the aspirate and dispense mode, the solution to be dispensed is aspirated up through the **synQUAD head**, then dispensed into a higher density microtiter plate. The aspirate and dispense mode is useful for

transferring limited volume samples such as live cells, enzymes, reagents, or proteins.

The **patented synQUAD technology** incorporated into the **Cartesian Dispensing systems** is able to place 500 nL into 1536 wells in 20 seconds. This revolutionary **non-contact dispensing** of drops on the fly is ideal for the most demanding HTS dispensing applications where high-speed and precise low volumes are required.

Key Benefits

- High Speed
- Non-Contact
- Dynamic Dispense Range
- Dual Mode:
 - Aspirate and dispense
 - "On the fly" dispensing

HTS synQUAD Systems

MicroSys

MicroSys 4000XL

3 Microtiter Plate Nest

MicroSys 4100XL

11 Slide Nest



PixSys

PixSys 4200XL

10 Microtiter Plate Nest

PixSys 4500XL

50 Slide Nest

Specifications

- 4 synQUAD Channels
- 3 Microtiter Plate Positions or 11 Slides
- Integrated Wash/Vacuum System
- Vacuum Pump
- Computer Controller

- **Dynamic Dispense Range:**
20 nL - 20 µL
- **Precision Per Channel:**
< 7% CV for 100 nL
< 5% CV for 200 nL to 500 nL
< 4% CV for 500 nL to 1 µL
< 3% CV for 1 µL to 4 µL

- 8 synQUAD Channels
- 9 Microtiter Plate Positions or 50 Slides
- Integrated Wash/Vacuum System
- Vacuum Pump(s)
- Computer Controller

PreSys

PreSys 6E4040XL

2 Microtiter Plate Nest

- 8 synQUAD Channels
- 2 Plate Positions:
 - 1 Active for robot interface
 - 1 Passive
- Integrated Wash Vacuum Station
- Vacuum Pump
- Computer Controller
- Optional:* Plate Handler

- **Dispense Accuracy:**
± 7% at 50 nL
± 5% at 100 nL
- **Dispense Speed:**
20 seconds to fill a 1536 well plate with 500 nL (8 channel system).
- **Positioning Performance:**
Stepper Motor Resolution = 1.3 µm;
Repeatability < ± 10 µm; (95% Confidence)

ProSys

ProSys 4210XL

20 Microtiter Plate Nest

ProSys 4510XL

100 Slide Nest

- 8 synQUAD Channels
- 20 Microtiter Plate Positions or 100 Slides
- Integrated Wash/Vacuum System
- Vacuum Pump(s)
- Computer Controller



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