

The speed and versatility of the Scorpion make it the ideal choice for synthetic chemists to automate High-Throughput Experimentation in your lab. With the Scorpion, a synthetic chemist will see a 10-fold increase or more in the number of experiments being run.

The Scorpion can access 6 deck positions with a minimal footprint. The unique lightweight and durable delta arm design allows for an open work space. The high speed arm movements increase throughput and facilitate the transfer of solvents without dripping. The enclosed work space can be filled with gas to create an inert environment.

The open design of the workspace and powerful software allow the system to be configured for virtually any type of labware. Dram tubes, glass vials, deep well blocks, and many others.

#### Features:

- 10-fold increase or more in the number of experiments that can be setup versus a manual workflow.
- Small foot print fits into standard sized fume hoods.
- Enclosed workspace and airflow system allow for an inert atmosphere to be created so sensitive reagents can be used with confidence.
- Liquid level sensing allows the tip to follow liquid levels, improving aspirate and dispense accuracies.
- Single channel head and optimized dispense modes make it easy to work with a wide range of solutions.
- Intuitive and easy to use software makes setting up complex experiments a simple task.
- The single channel head design allows the Scorpion to access any type of tube, vial, or plate.
- Work safer, limit lab personnel exposure to solvents.

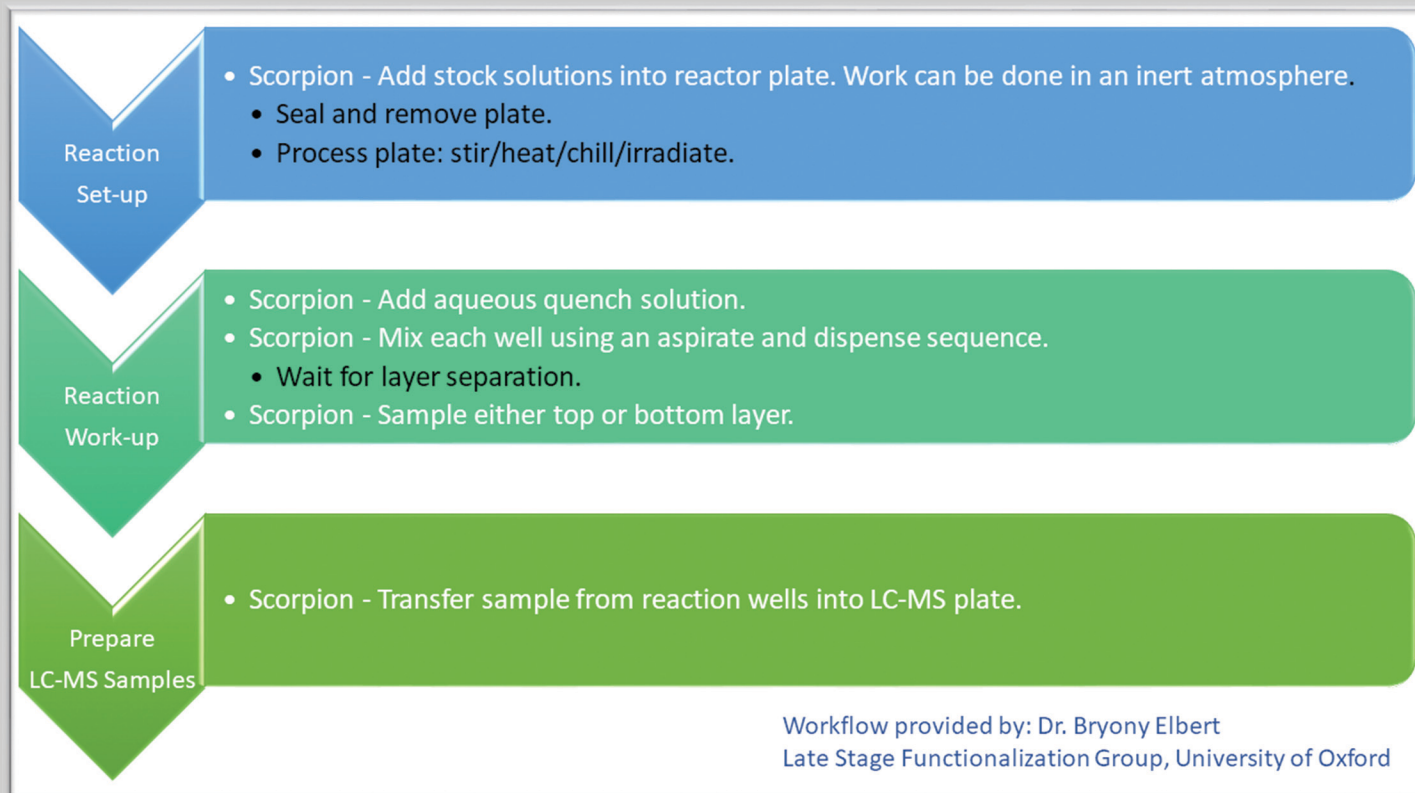
#### Applications:

- High-Throughput Experimentation.
- Reaction optimization.
- Reaction miniaturization to screen conditions without wasting precious sample.
- Long term scheduled reaction sampling for kinetic assays.
- High-throughput screening of ligands or substrates for reactions.



The Scorpion can automate the slow and tedious task of manually setting up reactions one-by-one. The Scorpion can perform your High-Throughput Experimentation set-ups and greatly improve throughput while you spend your time analyzing your results and not at the bench.

A typical work flow example using the Scorpion for High-Throughput Experimentation is shown below. Let the Scorpion do the tedious work for you with precision and accuracy.



For more information on how the Scorpion can be used to automate your lab work and increase your throughput, please call or email us to discuss your lab's needs with our Application Scientist.

Catalog #: 640-1000-20

Includes: Desktop computer  
1 year warranty

Specifications:

Size: 19 (48.3) x 19 (48.3) x 27.5 (69.8) in(cm)  
Weight: 90 lbs, 41 Kg  
Electrical: 100 to 240 V, 300 W

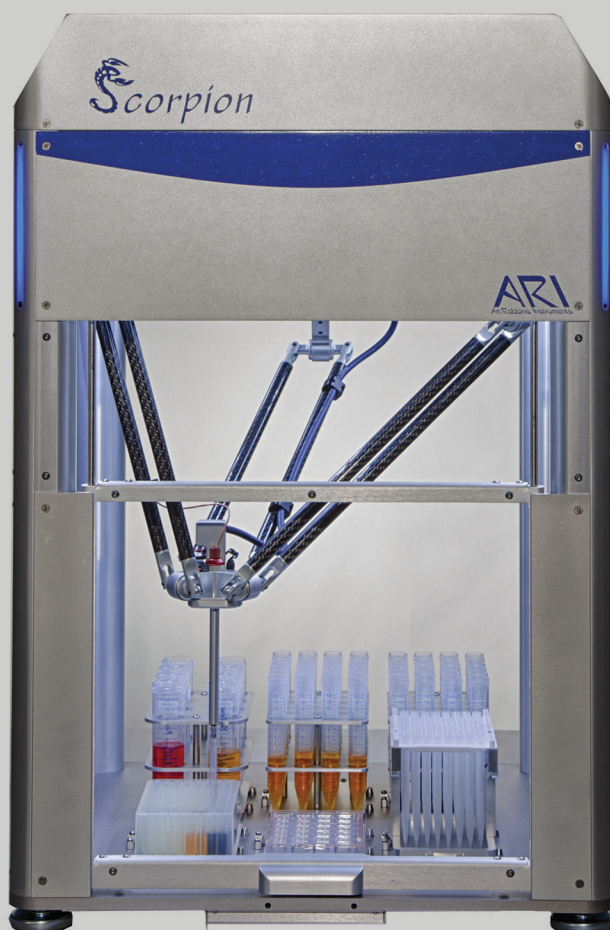
The Scorpion Liquid Handling Work Station is a high speed single channel pipettor. This extremely versatile work station can be used to perform anything that you can do with a hand-held pipettor with the speed, reliability and precision of an automated dispenser.

The first delta style robot designed specifically for laboratory automation, the Scorpion can access 6 deck positions in a minimal footprint. The unique lightweight and durable delta arm design allows for an open work space and high speed movements. The 6 positions can accommodate 15 mL tube racks, 50 mL tube racks, deep well blocks, standard 96, 384 and 1536 well plates, as well as tip racks and SBS sized accessories. Available pipette tips include 50  $\mu$ L, 200  $\mu$ L and 1 mL volumes.

The user friendly software makes it simple to setup complex grids and titrations. Liquid transfers can be defined as volumes, pH or concentrations, making a titration quick and easy to execute.

### Features:

- Compatible with 50  $\mu$ L to 1000  $\mu$ L pipette tip allowing dispensing down to 1  $\mu$ L. Multiple tip sizes can be used in one protocol.
- Dispense units can be defined as volume, concentration or pH.
- Deck will accommodate 6 SBS sized plates or racks.
- Tip head design allows pipette tips to reach the bottom of tall tubes such as 15 mL and 50 mL tubes.
- Liquid level sensing allows the tip to follow liquid levels improving aspirate and dispense accuracies.
- Positive air displacement pipette head and optimized dispense modes make it easy to work with a wide range of fluid viscosities such as DMSO, 80% Glycerol, PEG and alcohols.
- Intelligent dispense sequencing combined with high speed motion minimizes experiment set up time.



## Optimized Dispensing Modes

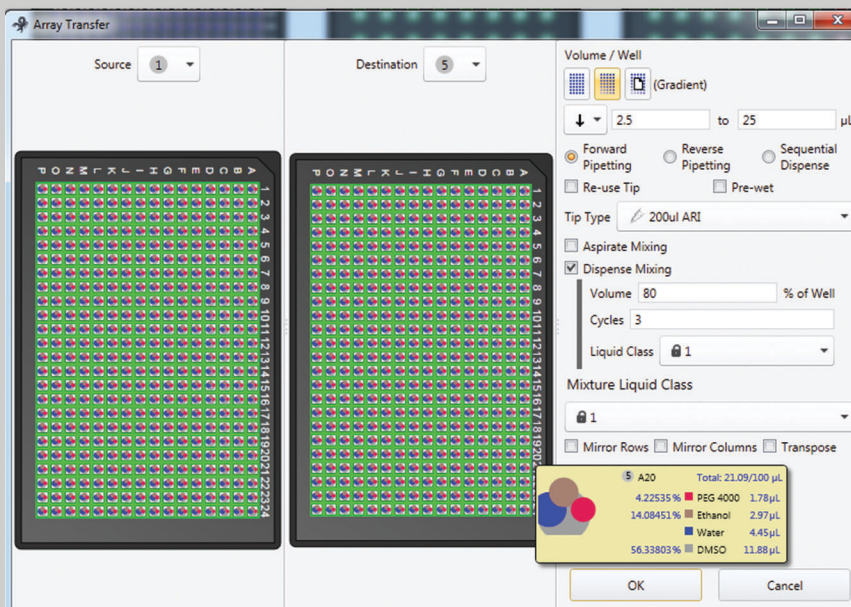
The Scorpion utilizes 3 dispense modes, each with unique advantages. Forward, Sequential, and Reverse modes, combined with tip usage criteria, create a powerful liquid handling tool set. In Forward mode, commonly used with hand-held pipettors, the requested volume is aspirated and dispensed. In Sequential mode, the tip is first filled with the complete volume to sequentially dispense into a series of wells. Reverse mode allows for a controlled amount of fluid to be kept in the tip while the desired volume is dispensed, thus increasing the accuracy of a variety of dispensed fluids by alleviating forces such as capillary action, fluid stiction, and surface tension. Each mode allows the dispense to be completed by using the same tip or by selecting a new tip for each cycle. These 3 modes allow for an appropriate liquid handling method to be selected to optimize the throughput, precision and accuracy of each dispense.

### 200 $\mu$ L Tip Test Data

Reagent	Volume	CV
Water	1 $\mu$ L	6.3%
DMSO	1 $\mu$ L	3.8%
DMSO 80%	1 $\mu$ L	3.9%
Methanol	10 $\mu$ L	4.5%
Ethanol	10 $\mu$ L	3.4%
Isopropanol	10 $\mu$ L	2.9%
DMSO	10 $\mu$ L	2.2%
Glycerol 50%	10 $\mu$ L	2.3%

### 1 mL Tip Test Data

Reagent	Volume	CVs
Water	1 $\mu$ L	4.4%
DMSO	1 $\mu$ L	2.3%
DMSO 80%	1 $\mu$ L	5.0%
Methanol	10 $\mu$ L	3.9%
Ethanol	10 $\mu$ L	2.0%
Isopropanol	10 $\mu$ L	3.7%
DMSO	10 $\mu$ L	2.5%
Glycerol 50%	10 $\mu$ L	2.1%



### Specifications:

Size: 19 (48.3) x 19 (48.3) x 27.5 (69.8) inches (cm)  
 Weight: 90 lbs, 41 Kg  
 Electrical: 100 to 240 V, 300 W  
 Environment: 4° to 70° C, Non-condensing

**Ordering Information:** Catalog #: 640-1000-10  
 Desktop computer with software