

LIQUID HANDLING

ATS-100 Acoustic Transfer System

Expand your capabilities with the ATS-100 Acoustic Transfer System. Now, you can reliably dispense ultra-low liquid volumes for your screens, assays, and even arrays while reducing waste, time and costs.

The ATS-100 transfers chemical and biological solutions with unparalleled accuracy and precision directly from one plate to another. Fully user-tunable, the ATS-100 is flexible, application friendly and is highly adaptable to meet a broad range of liquid handling needs and requirements. Using the ATS-100's patented acoustic transfer process you can perform your experiments with the lowest starting volumes of any liquid handling device on the market using conventional, off-the-shelf* wellplates. Then, continue to use your small liquid supply until you achieve the lowest true dead volumes (i.e., $0.5\mu\text{L}$ 3456; $1\mu\text{L}$ 1536; $2\mu\text{L}$ 384) in the industry. All the while you will have complete confidence in the successful transfer of your samples because with the ATS-100's True Non-contact Technology™ the remaining liquid levels in your source plate are actively monitored in real-time as the dispensing process is taking place.

Dispense liquids using sound energy into and out of off-the-shelf 96, 384, 1536 and 3456 wellplates. No print heads with fixed-spacing or volume-specific tip sizes to deal with. Easily perform anything from basic wellplate reformatting and backfilling to compound library screening, hit-picking, serial dilutions (IC-50s) or produce arrays; even difficult ones such as proteins, complex lysates and tissues without the worry of cross-contamination from tips. The ATS-100 can also easily integrate with other laboratory equipment for a complete automated solution.

Specifications

- fluid viscosity: 0-20 cP
- surface tension: 27-72 dynes/cm
- density: 0.5-2.0 g/cm³
- transfer volume: 1nL to 2 μL + (Larger volumes increase transfer times.)
- transfer variability: <math><10\%</math> CV
- 384 wellplate replication: <math><2.5\text{ min}^*</math>
- 1536 wellplate replication: <math><6\text{ min}^*</math>
- 3456 wellplate replication: <math><13\text{ min}^*</math>
- * For a single unit-volume well-to-well transfer.
- size: 71cm W x 78cm D x 65cm H
- weight: 115 kg
- clean dry air: 60-80 psi, 2 CFM
- electrical: 110 VAC, 50/60 Hz or 230 VAC, 50 Hz
- coupling fluid: distilled water (400 ml)



- Open platform acoustic dispensing system
- Quiet operation for optimum process monitoring in robotic work conditions
- (No external vacuum generator or 24/7 water bath operation required)
- Dispense aqueous liquids or DMSO from 1nL to 2 μL +
- Robust, user-tunable liquid calibrations
- Lowest starting & dead volumes (e.g., <math><1.0\mu\text{L}</math> for a 1536 wellplate)
- DMSO concentration monitoring
- Perform screens, hit-picks, serial dilutions, RT-PCR and protein crystallization assays
- Use less reagents, eliminate consumable tips, and washing steps

Components & Features

- internal coupling fluid circulation system
- wellplate charge-neutralizing system
- CCD camera wellplate monitoring system
- wellplate interference sensor
- internal barcode reader
- internal destination plate flipper
- ethernet-based connectivity
- built-in Windows based PC
- serial-dilution and hit-pick mapping software included
- quick-release destination grippers
- real-time data collection & management system
- landscape wellplate orientation for both source and destination plates (external plate flipping or rotation not required)
- single-position plate load/unloading available
- DMSO concentration monitoring

