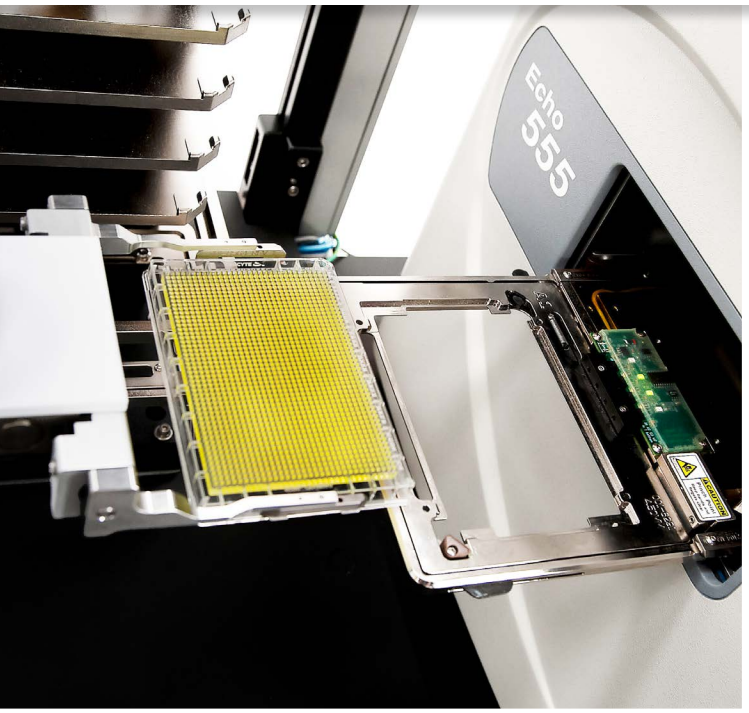

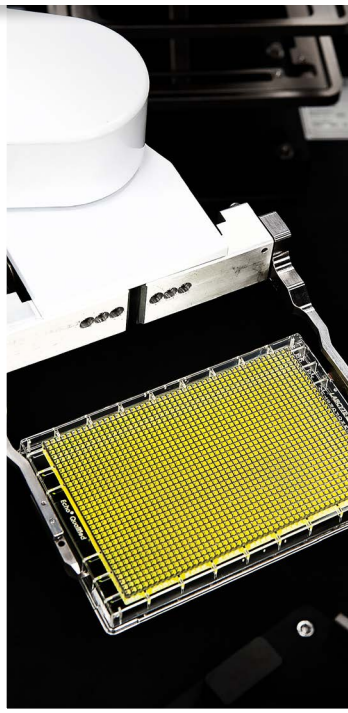

Access™

LABORATORY WORKSTATION

BROCHURE

Version 2.1 | **MAY 2017**

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ACCESS LABORATORY WORKSTATION

Access™ Laboratory Workstation

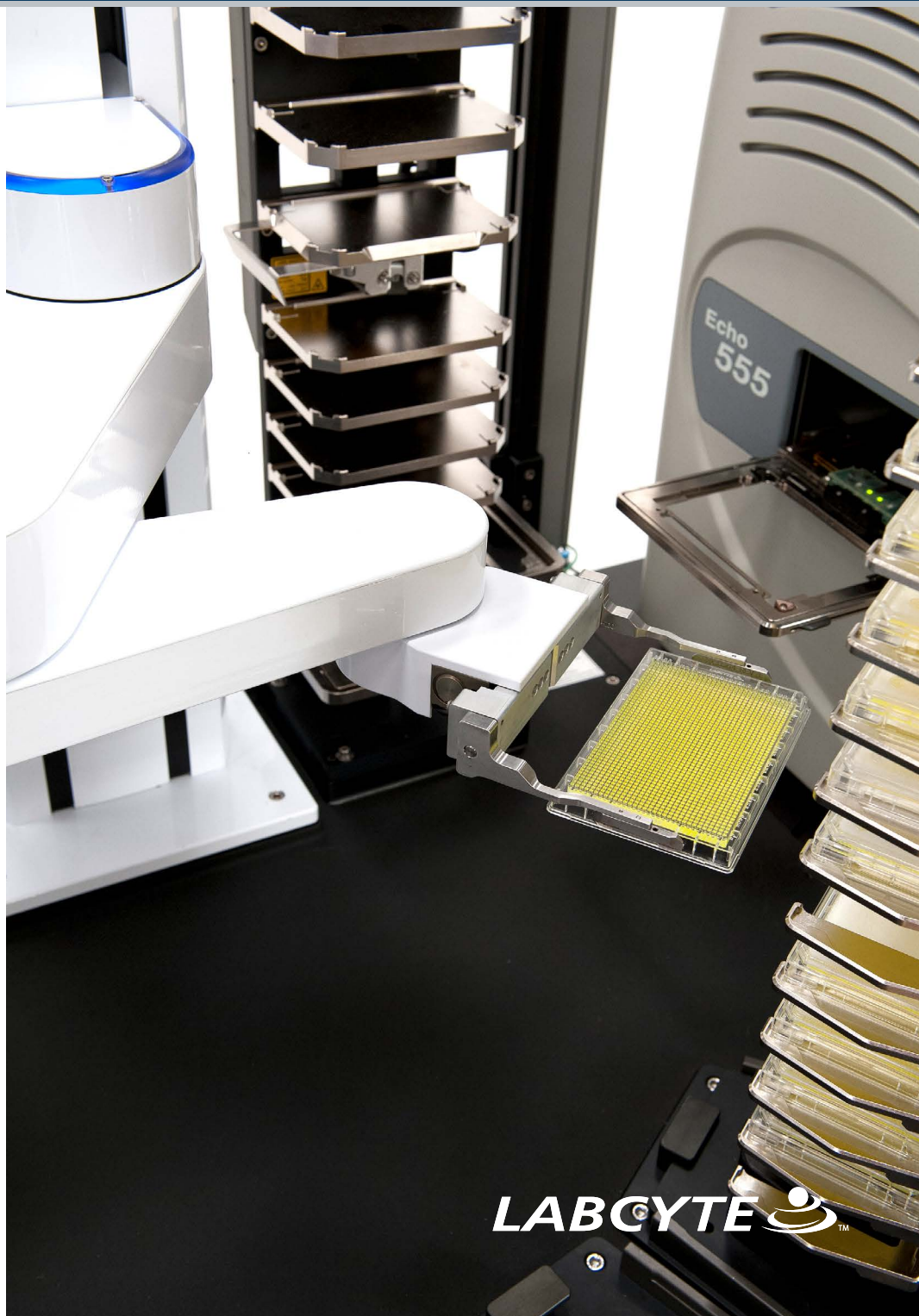
Small-scale Automation with Large-scale Results

Combine the revolutionary performance of Echo® Liquid Handlers with automated plate handling and integrated devices into walk-away systems tailored for a range of applications. Access Laboratory Workstations are modular and flexible solutions that easily scale when needed.

Easily add automation to any Echo platform

- Standardized and fully tested configurations
- True ease-of-use with graphical, wizard-based Tempo™ Automation Control Software
- Seamless incorporation of Echo Liquid Handler protocols into fully automated protocols
- Configurable with a variety of devices to meet a wide range of applications and workflows
- Improved liquid handling performance and throughput
- Easy communication with LIMS and database systems
- Safe to use in chemical and biological environments

The Access Laboratory Workstation is the fastest way to maximize the power of the Echo Liquid Handler



Ready-to-Go Robotic Systems for Echo® Liquid Handlers

Configure and Scale to Meet Your Demands

Access Laboratory Workstations multiply the benefits of the Echo platform by improving overall assay throughput and reproducibility. With the ability to integrate a variety of devices and the modularity to scale when needed, each workstation offers the flexibility required by frequently-changing assay requirements.

Integrate devices for

- Sealing
- Peeling
- Centrifugation
- Bulk dispensing
- Detection
- Incubation
- Plate storage
- Washing
- More...

Add accessories to

- Read barcodes
- Manage lids
- Manage source plate inserts
- Re-grip plates

Scale by adding

- Extension deck and shelf for devices
- Rear tables and shelves for more devices

Integrate any Echo Liquid Handler

Store plates on-deck in

- 50-plate stacks
- 20-plate random-access racks
- 25-plate random-access racks
  (mix and match up to 4)

INCLUDES:

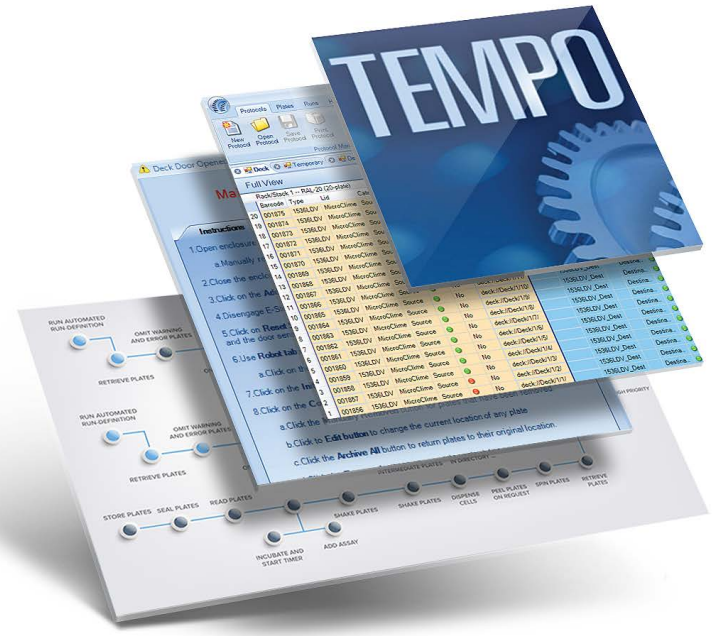
- System computer
- Utility / communications hub
- Emergency system stop
- Safety enclosures

Automation in Just One Click

Tempo™ Automation Control Software

Dynamic Scheduling for Access Laboratory Workstations

Tempo Automation Control Software offers a research-friendly interface for scheduling Access Laboratory Workstation protocols. It manages all tasks — including sample management, plate handling, liquid handling, detection, and laboratory information management system (LIMS) updates. Tempo Software is included with all Access Workstations. It interfaces directly with all compatible versions of Echo® Software Applications.



Easy Customization

Users can schedule routines to start immediately or at a specific date and time. If a scheduled routine has not started, users can step back through the setup wizard to make changes. Routines can be grouped in sets, re-prioritized on-the-fly and initiated by a LIMS.

Seemless Integration *with* Echo Software Applications

Echo Software Applications utilize interactive wizards and graphics to develop complex liquid transfer protocols for Echo systems. Tempo Software imports these protocols and coordinates Echo liquid handling actions, robotic plate movements, and tasks performed by integrated devices into a fully optimized schedule — without requiring users to build loops, write custom scripts, or manage external programs.

Echo®
Array Maker

Transfer samples from microplates to custom microarrays, MALDI chips, or arrays at the bottom of a microplate well

Echo®
Cherry Pick

Import pick lists to cherry pick samples from large libraries for secondary screening and lead optimization

Echo®
Combination Screen

Provides a graphical interface to visually combine dose-response curves, controls, and single concentration transfers into combination screening protocol

Echo®
Dose-Response

Interactive prompts guide the mapping of transfers to create curves of varying concentration range using direct dilution

Echo®
Plate Audit

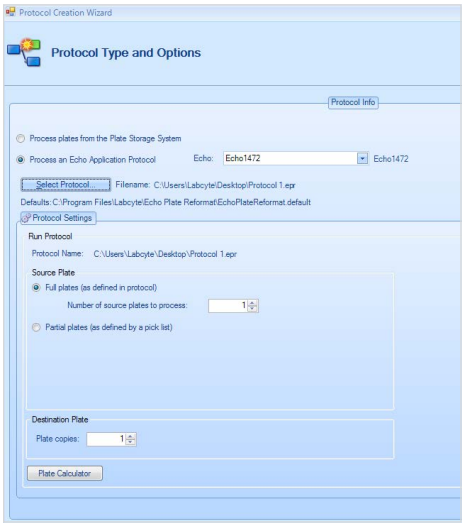
Analyze sample characteristics across sample plates and build validation rules to qualify plates for Tempo software protocols

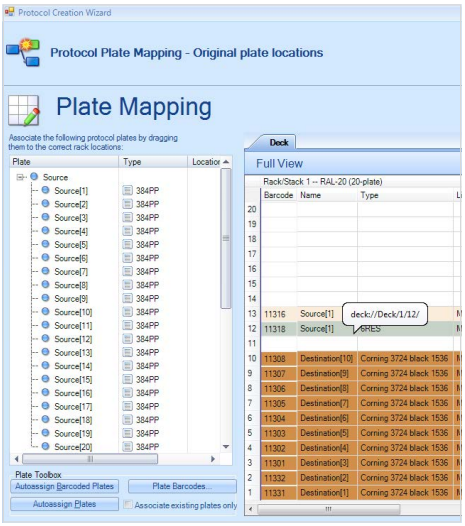
Echo®
Plate Reformat

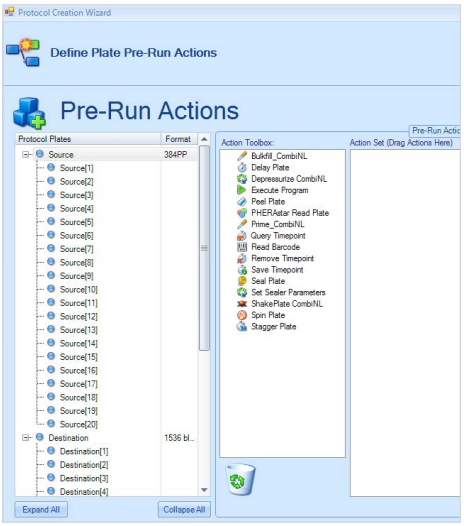
Quickly replicate sample plates into standard or completely custom layouts

3 Simple Steps to Build Complex Routines

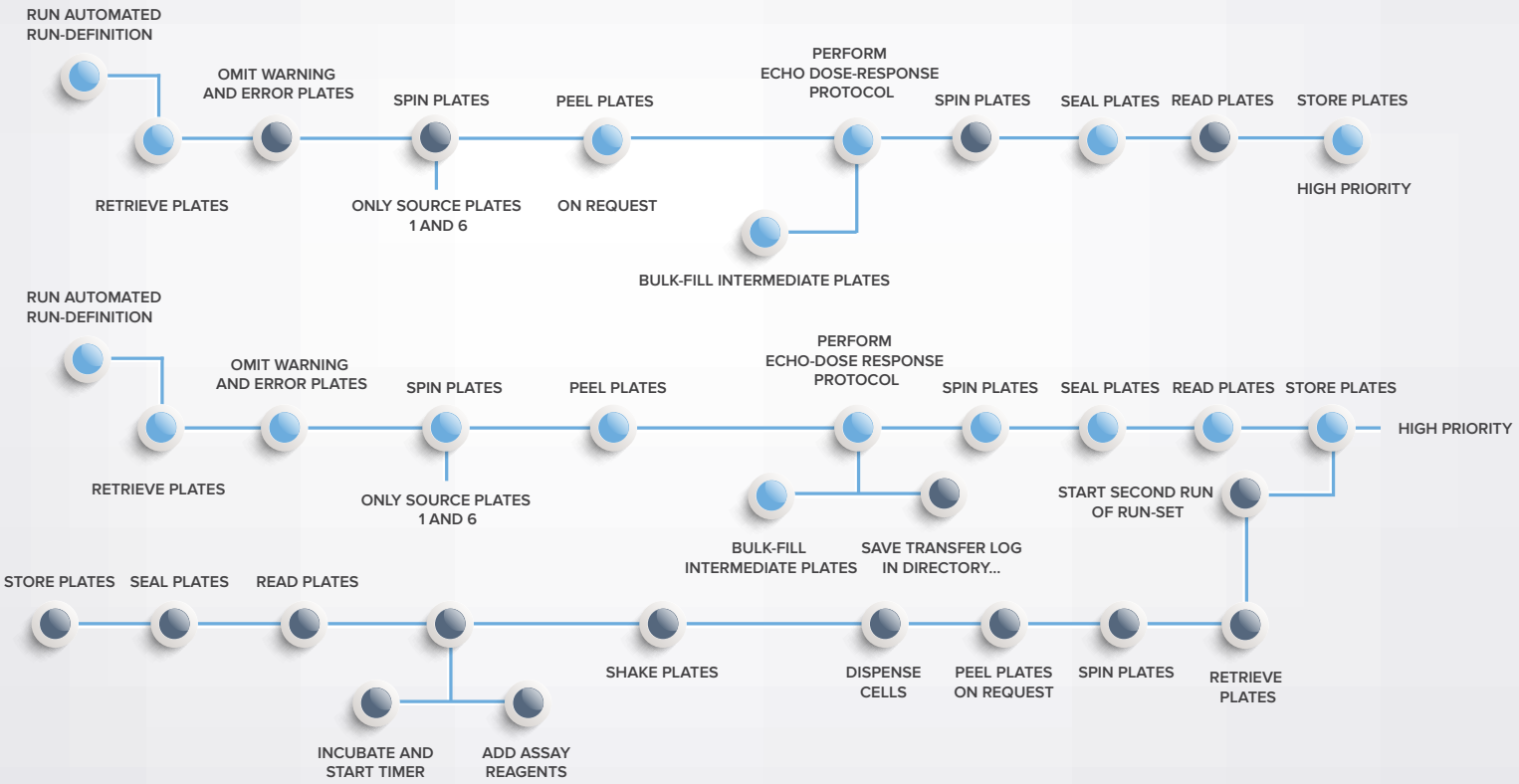
1. Import Echo application protocol and corresponding pick lists
2. Map protocol plate maps to physical plate inventory
3. Assign pre-run and post-run plate handling tasks







Achieve complex routines with ease



Configurations for a Broad Range of Applications

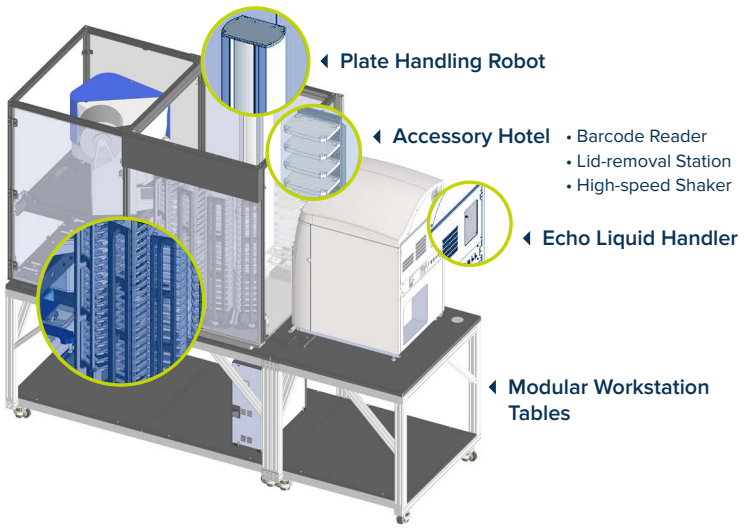
Assay-Ready Plate Preparation

Assay-ready Plate Preparation configuration incorporates a sealer, peeler, bulk-dispenser and centrifuge to support walk-away library reformatting, replication, cherry-picking and dose-response. This workstation accommodates all Echo® Qualified Plates and most ANSI-compliant/SBS-standard microplates. With random access microplate storage and options for barcode reading, shaking and de-lidding, the Access Laboratory Workstation offers the productivity of a large-scale system in a compact workspace.

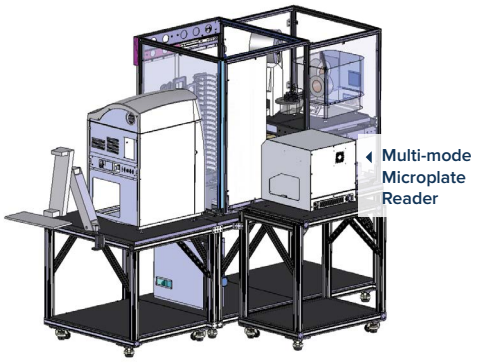
Plate Handling Devices
- Sealer
- Peeler
- Bulk Dispenser or Washer
- Centrifuge

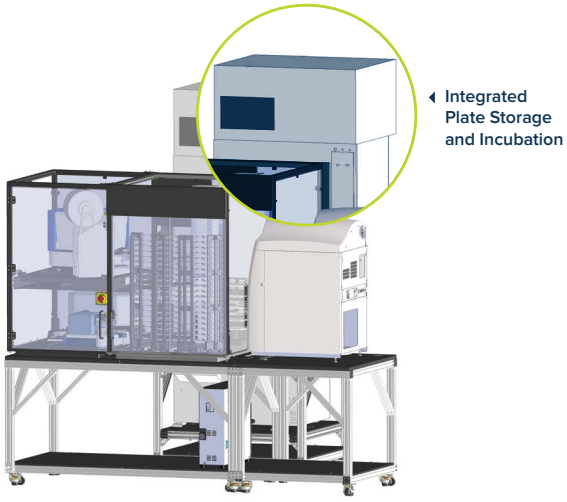
Microplate Storage Rack

Any combination of four:
- 20-Plate Random Access Rack
- 50-Plate FILO Stack
- 25-Plate High-Density Random Access Rack



Lead-optimization and Secondary-screening Assays



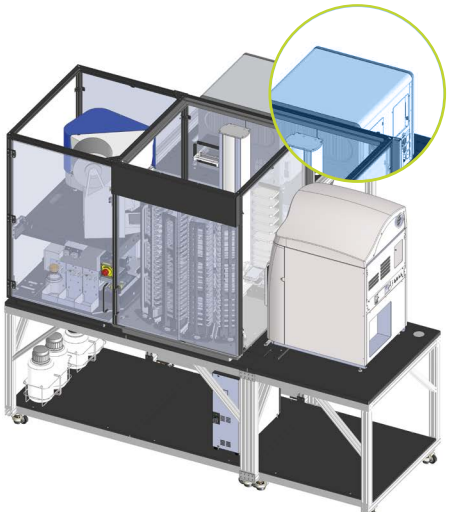


Labcyte offers the option to integrate multi-mode microplate readers and controlled storage systems that address a range of biochemical and cell-based assays into a standard Access Laboratory Workstation configuration. This flexibility enables walk-away automation for Cytochrome P450 screening, cell signaling, cell viability, and other types of assays. Storage systems can be configured for cold dry compound storage, warm humid cell storage or ambient storage.

Configuration Options *continued...*

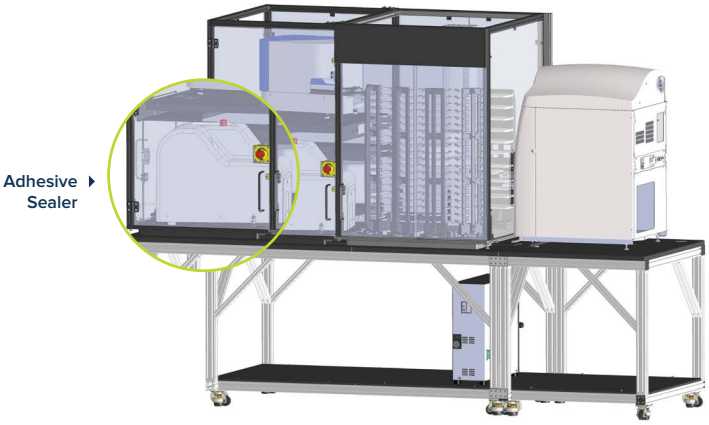
High-throughput Gene Expression

The Access Laboratory Workstation, combined with a one-step qPCR preparation workflow for RT-qPCR, can be adapted for high-throughput gene expression screening. With its ability to transfer nanoliter volumes of samples and reagents accurately and precisely, the Echo® liquid handler dramatically reduces screening costs—making one-step RT-qPCR viable as a high-throughput screening method. To maximize efficiency, the Access Laboratory Workstation incorporates two Roche LightCycler systems with the Echo Liquid Handler and other devices for cell-dispensing, washing, centrifugation and sealing.



LightCycler® is a registered trademark of Roche.

Lead-optimization and Secondary-screening Assays



The Access Laboratory Workstation for protein crystallography applications incorporates an adhesive sealer to prevent evaporation and eliminate the risk of heat exposure, which can occur with thermal sealing. Random access to reagent plates enables on-the-fly creation of grid screens from high-concentration stocks.

Access Laboratory Workstation Technical Specifications

Base dimensions	1651 mm width x 914 mm depth x 1157 mm height (65 x 36 x 45.5 inches)
Extended dimensions	Approximately 2360 mm width x 914 mm depth x 1157 mm height (84.25 x 36 x 45.5 inches) depending on configuration
Weight	Approximately 68 kg to 102 kg (150 to 225 lbs) depending upon components
Electrical	120V, 25A or 240V, 15A ±10%, 50/60 Hz
Operating environment	21°C ± 5°C (70°F± 9°F), 10–80% relative humidity, non-condensing

Air	Filtered, oil-free, dry air: • 552 kPA (80 PSI) min • 1034 kPA (150 PSI) max 70 Lpm at 621 kPa (2.5 cfm at 90 psi)
Vacuum	78 kPa (23 inches Hg) minimum, 2.5 CFM
Labware compatibility	All Echo® Qualified Microplates and most ANSI-compliant/SBS-standard microplates (96, 384, 1536)
Application software	Tempo™ Automation Control Software and compatible Echo® Software Applications
Operating software	Microsoft Windows 7 Professional

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The Future of Science is Sound

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