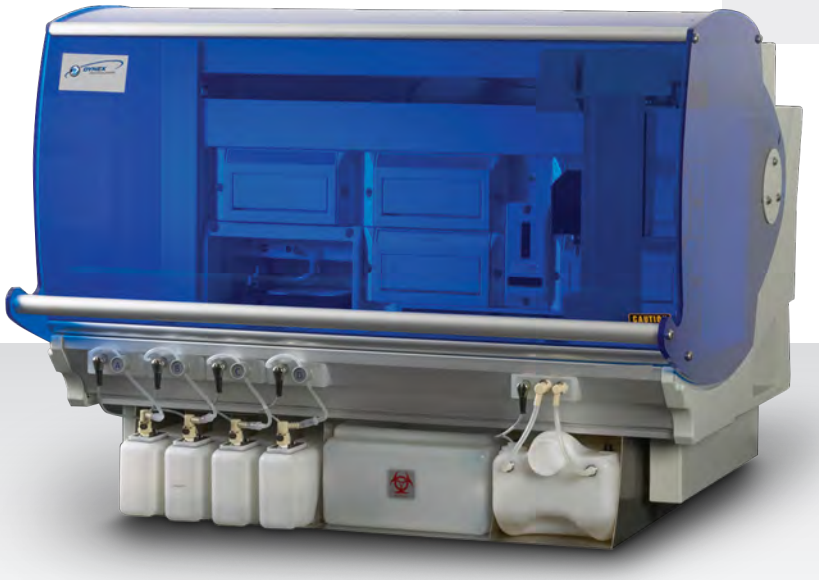
DSX®

Automated ELISA Processing System

Maximizing Lab Efficiency

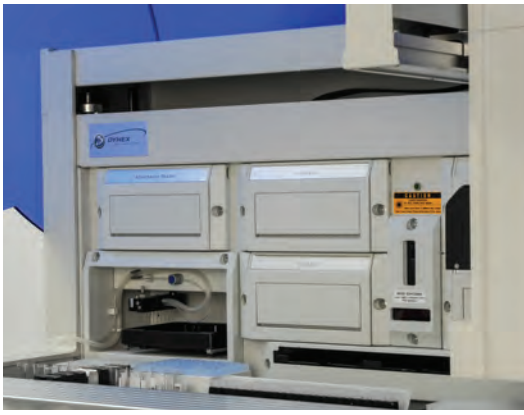


DYNEX®

Perpetual Innovation

Controlling Lab Capacity for Reliable Results

The DYNEX DSX Automated ELISA System is a proven, fully-automated open system with a unique dispense synchronization that helps eliminate plate drift and achieve consistent results across four independent plate incubators. This helps to manage testing workload with reduced labor and walkaway capability to maximize lab personnel efficiency.



Built for Dependability

The trusted standard… DSX is an open, modular ELISA processing system designed specifically for busy laboratories that require advanced automation. It can handle virtually any automatable ELISA immunoassay delivering all you need to ensure the rigorous, repeatable analyses required in critical applications.

DSX's unique washer synchronization feature ensures consistent results across the plate, eliminating plate drift issues and lowering overall CVs. Several user-definable options provide significant programming flexibility:

- Plate-specific height settings
- Super Sweep mode that aspirates liquid in both the X- and Y-axis of plate wells, leaving minimal residual volume
- Well-bottom washing lowers the dispensers to more thoroughly "clean" the base of each well
- Critical washer timing that mimics manual wash steps

REVELATION DSX® data analysis software offers a graphical user interface with intuitive Windows®-based operation. The following advanced features facilitate assay performance:

- The Data Reduction Wizard simplifies the programming of even the most complex assay configurations and calculations
- Online Help is available to assist with assay set-up and programming

Shown to be Worthy

With over 3,500 DSX systems installed worldwide, DSX has been proven to deliver all you need to ensure the rigorous, repeatable analyses required in critical applications. What's more, DSX has achieved 98.2% uptime when mean time between failure target is set at 250 days.

Learned Error Recovery

To support walkaway automation, the DSX can be trained to perform appropriate error recovery actions if an error condition is detected.

Cover Lock

The dark cover locks automatically when the DSX begins to run, protecting reagents from room light and protecting both samples and reagents from interference.

Sample Identification

An on-board barcode reader tracks samples and plates in process.

Alarms

"Wash Buffer Low" and "Waste Full" alarms.

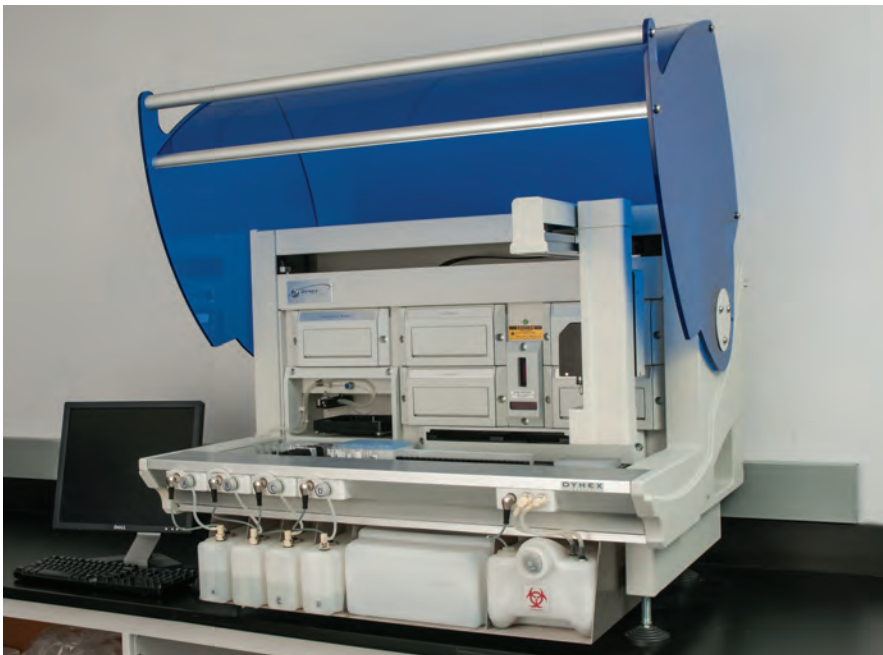
Pipette Security

Fluid level sensing, tip detection, tip-ejection and clot detection functions protect assays as well as the DSX robotic pipette.

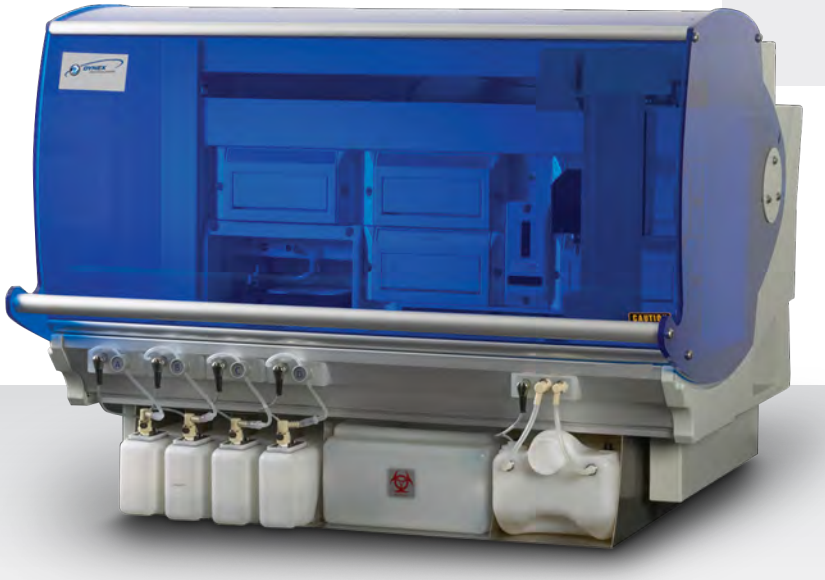
Accomplishes the Task

This open, modular ELISA system is designed specifically for busy laboratories that require advanced automation. Four independent plate incubators help manage testing workload by relieving labor effort and allowing walkaway capability to maximize lab efficiency.

The Worklist Load Wizard guides you through the process of setting up the DSX Worklist. Easily… the Wizard graphically shows where to place reagents, samples and plates at the beginning of each run.



DSX®



About DYNEX Technologies

DYNEX is a worldwide manufacturer of microplate instrumentation, seamlessly integrating advanced detection with fully-automated sample handling, consumables and accessories. The DYNEX systems have a proven track record of high-quality products, excellent service and support.

bsi. ISO 13485 Medical Devices Quality Management

INTERTEK ETL LISTED c US

CE

RoHS COMPLIANT

PN: 95000010, Rev D

DYNEX® TECHNOLOGIES

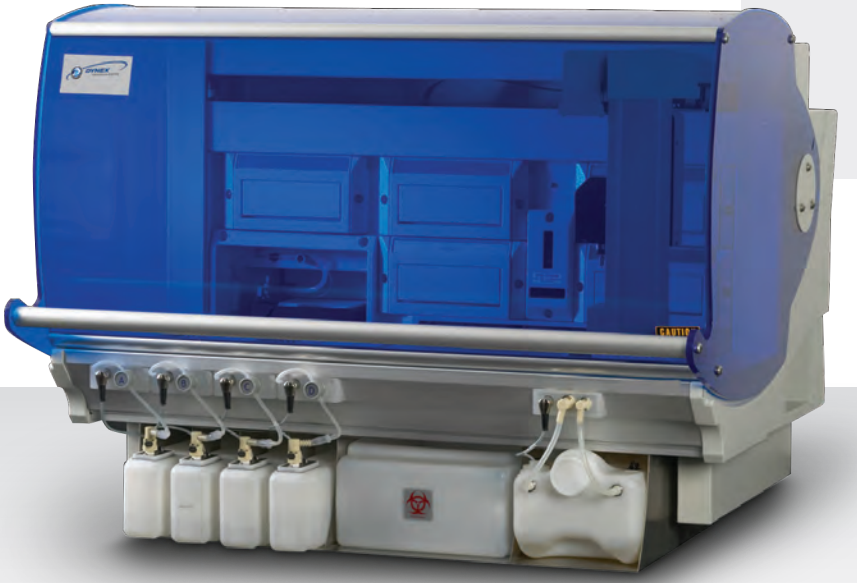
DYNEX Technologies
Corporate Headquarters
14340 Sullyfield Circle
Chantilly, VA 20151-1621 USA
703.631.7800 Phone
703.803.1441 Fax
800.288.2354 U.S. Toll-free
customerservice@dynex.com

DYNEX Technologies Ltd.
Worthing, UK
adminuk@dynex.com

DYNEX Technologies GmbH
Denkendorf, Germany
dynexgermany@dynex.com

DYNEX Technologies, Inc.
Hong Kong
dynex-asia@dynex.com

DSX Specifications



About DYNEX Technologies

DYNEX is a worldwide manufacturer of microplate instrumentation, seamlessly integrating advanced detection with fully-automated sample handling, consumables and accessories. The DYNEX systems have a proven track record of high-quality products, excellent service and support.

Ordering Information

Product #	Instrument/Components
65100	DSX Ambient System (no incubators)
65200	DSX System with 2 incubators
65400	DSX System with 4 incubators
65600	Incubator module
65700	Sample ID barcode scanner module

Product #	Consumables
65930	Deep-well microplate, 1 mL
62910	Deep-well strips (250/box)
65950	Reagent tubes, 25 mL (24/pack)
65920	Reagent tips (432/box)
65910	Sample tips (432/box)
65940	Control vials with caps (33/pack)

DYNEX Technologies
Corporate Headquarters
14340 Sullyfield Circle
Chantilly, VA 20151-1621 USA
703.631.7800 Phone
703.803.1441 Fax
800.288.2354 U.S. Toll-free
customerservice@dynex.com

DYNEX Technologies Ltd.
Worthing, UK
adminuk@dynex.com

DYNEX Technologies GmbH
Denkendorf, Germany
dynexgermany@dynex.com

DYNEX Technologies, Inc.
Hong Kong
dynex-asia@dynex.com

Physical Specifications

Dimensions	Metric	Non Metric
Width:	106 cm	42 in
Depth:	91 cm	36 in
Height:	80 cm	32 in
Footprint:	0.98 sq m	10.5 sq ft
Bench Weight:	136 kg (max.)	300 lbs (max.)
Ship Weight:	244 kg (max.)	537 lbs (max.)

Power Supply Requirements

Voltage:	100 – 240 V automatic conversion
Frequency:	50/60 Hz
Power Consumption:	< 800 VA (online UPS recommended)

System Specifications

Number of Plates:	4
Sample Capacity:	96 (98 positions available)
Continuous Sample Loading:	Yes
Sample Tube Size:	10 mm – 16 mm diameter 40 mm – 100 mm height
Number of Reagents:	Up to 24 (25 mL tubes)
Number of Standard/Control Bottles:	33 (1.5 mL vials)
Assays per Plate:	1 assay per strip or up to 12 assays per plate
Dilution Wells Capacity:	Up to 192 deep-well strips (24 x 8)
Sample Tip Capacity:	432 (4 x 108)
Reagent Tip Capacity:	41 tips

Reader Specifications

Photometric Range:	0.000 – 3.000 OD
Spectral Range:	405 nm – 690 nm
Filter Slots:	6 wavelength
Precision:	± 0.010 OD at 0.000 – 0.500 OD < 1% CV at 0.501 – 2.000 OD < 1.5% at 2.001 – 2.500 OD
Accuracy:	± 0.01 OD or 2.5% (0.000 – 3.000 OD) whichever is greater
Read Time:	< 10 seconds, single wavelength < 20 seconds, dual wavelength

Washer Specifications

Manifold Configuration:	8-way
Programmable Volumes:	50 µL – 999 µL
Wash Buffer Capacity:	4 wash bottles at 2.0 L, with level-sensing
Residual Wash Volume:	< 3 µL per well with dual-axis sweep in a flat-bottom plate
Dispense Precision:	≤ 5% CV (with 300 µL in a 96 well plate)
Waste Container:	8 L with waste full sensor

Incubator Specifications

Number of Incubators:	Up to 4
Temperature Range:	RT + 7° C to 50° C (elevated incubator) RT + 5° C (ambient incubator)
Temperature Accuracy:	± 1° C
Shaking:	> 15 Hz periodic or continuous
Temperature Monitoring:	Yes

Reagent Pipetting Specifications

Reagent Tip Size:	1,300 µL
Reagent Pipetting Volume:	25 µL – 1,000 µL
Reagent Pipetting Precision:	≤ 3% CV at 10 shots at any volume in operating range above 50 µL
Reagent Pipetting Accuracy:	± 2% of target volume at 50 µL or greater in operating range (single-shot mode)

Sample Pipetting Specifications

Sample Tip Size:	300 µL
Sample Pipetting Volume:	10 µL – 250 µL single-shot 25 µL – 100 µL multi-shot
Sample Pipetting Precision:	≤ 3% CV at any operating volume above 10 µL (single-shot mode)
Sample Pipetting Accuracy:	± 2% of target volume at any operating volume above 10 µL (single-shot mode)
Estimated Cycle Time for Sample	
Pickup to Delivery on Plate:	< 8 seconds^
Time to Dispense:	19 minutes (typical)^ 50 µL of 96 samples to plate from sample tubes or deep-well plates
Sampling Time w/Dilutions:	< 26 minutes (typical)^
Dilution Range:	1 part in 190 one-stage dilution 1 part in 36,100 two-stage dilution

Process Security

Liquid Level Sensing:	Yes (reagents, controls and samples)
Level Sensor System:	Pressure differential
Clot Detection:	Yes
Dispense Anomaly Detection:	Yes
Tip Detection:	Yes
Electronic Signature Pipetting:	Yes
Alarms:	Yes

Software

Controlling Software:	REVELATION DSX®
Work Protocols (Assays):	Unlimited
Data Processing:	Quantitative and qualitative
Levey-Jennings:	Yes
Westgard Rules:	Yes
Process Reporting:	Event log + error log
Automatic Error Recovery:	Yes
Password Access Control:	Yes

Attributes and specifications subject to change without notice.

PN: 95000340, Rev A