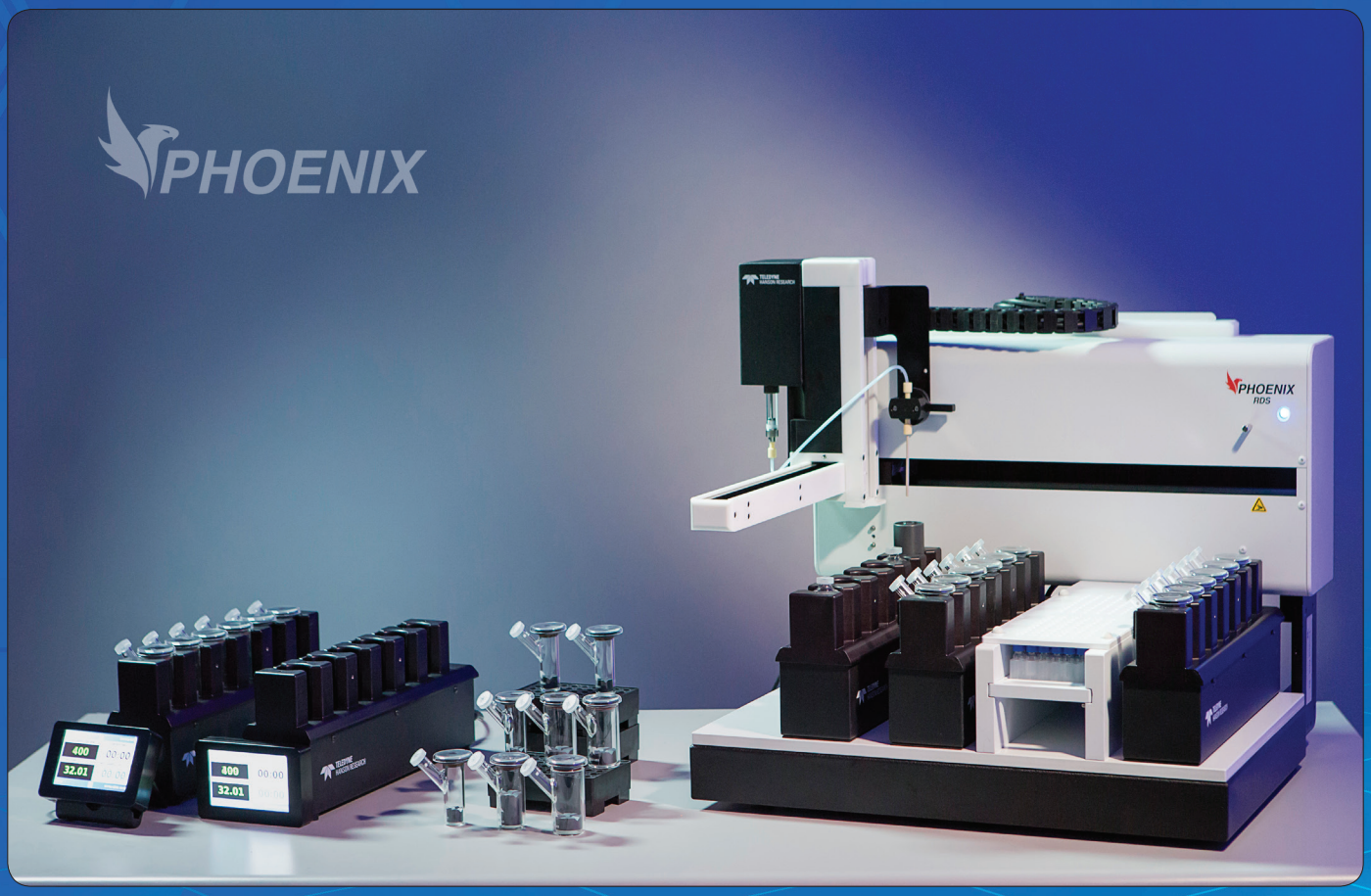
Phoenix™ Dry Heat Systems



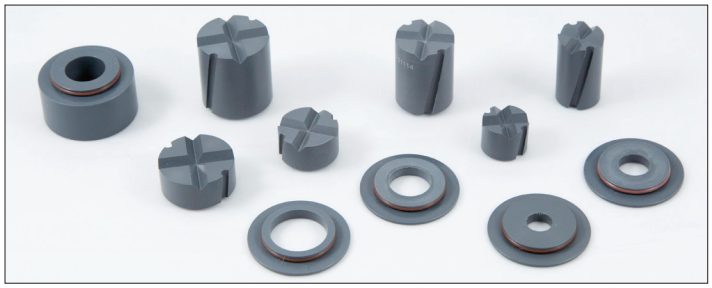
Refining the Art of Diffusion Cell Testing

TELEDYNE
HANSON RESEARCH

PHOENIX DB-6 MANUAL SAMPLING SYSTEM

PHOENIX DRY HEAT DIFFUSION CELLS

The new Phoenix™ Dry Heat Diffusion Cell is designed for precision, versatility, and ease-of-use in diffusion-testing labs. In manual sampling applications the wide opening in the arm accommodates standard pipette tips. For maximum versatility, lab analysts can choose from small, medium, or large borosilicate glass cells and, using special volume-adjustment mixer/inserts, can obtain receptor media volumes from 10 mL to 30 mL. An array of cell cap kits accommodates all 25 mm



Interchangeable mixer/inserts and cell caps.

membranes, orifice diameters from 9 mm to 20 mm, and dosage volumes from 0.25 mL to 6.2 mL. A convenient fill mark on the sampling arm indicates the cell is filled properly. Phoenix cells are easily inserted and removed from the heating block. Cell preparation, including dosage application, bubble detection, and bubble removal are fast and easy.

SIX-CELL MANUAL SAMPLING SYSTEM

The Phoenix DB-6 dry heat diffusion system provides a compact footprint for six-cell testing. Precision heating and stirring systems contained within the block makes the system fully portable, able to be placed in any position the analyst chooses for faster, easier cell preparation. With precise control of mixing speeds from 200 rpm to 900 rpm, and temperatures from 25 °C to 40 °C, the system meets or exceeds USP <1724> specifications. An advanced color touch screen running on an embedded single-board computer with a built-in SQL database and real-time clock provides advanced monitoring, diagnostic, and reporting capabilities, user-friendly programming and navigation, storage for up to 100 test protocols, and configurable security for up to 50 users. The large, bright display allows key parameters to be seen from a distance, including speed, temperature, elapsed time, and time to next sample. When sampling is due, the system alerts the

operator with the cell position, a countdown timer, and an audible beep. Test reports are delivered via the Teledyne Hanson serial validation printer.

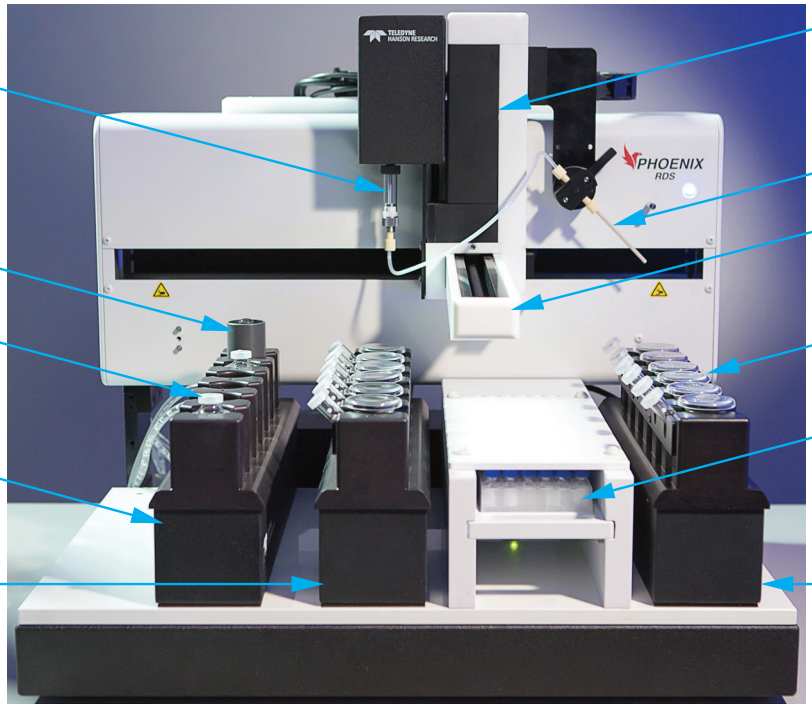
PHOENIX RDS AUTOMATED DIFFUSION TESTING

AUTOMATIC SAMPLING, COLLECTION, AND MEDIA REPLACE

The Phoenix RDS Robotic Diffusion Station refines the art of diffusion testing by incorporating Teledyne Hanson's breakthroughs in four areas: diffusion cell design; heating and stirring; automated sampling and collection; and computerized control. The dry heat diffusion cell at the heart of the system delivers significantly improved test results as compared to traditional water-jacketed, displacement-sampling systems. The precision heating and stirring components built into each of the six-cell blocks provide outstanding control of temperature and speed.

Automatic sampling and collection are accomplished through a syringe driven probe on an XYZ platform controlled by Teledyne Hanson's sophisticated Diffusion Master software. The automated system mimics the way sampling, collection, and media replace are performed by laboratory analysts when working manually, while simultaneously reducing the potential for variances due to procedural inconsistencies. The modular design of the six-cell dry-heat block allows laboratories to move smoothly between manual and automated methods when scaling to higher numbers of experiments.

PHOENIX RDS SYSTEM COMPONENTS



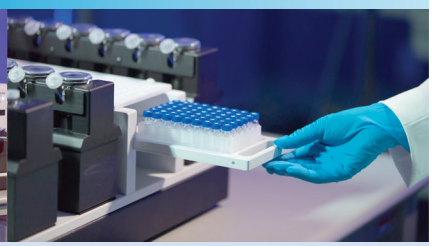
DIFFUSION LAB AUTOMATION BENEFITS

The Phoenix RDS automated testing system is designed to solve the problems most commonly encountered in diffusion testing and produce a positive impact on laboratory operations.

- Unattended operation during long tests
- Increased lab capacity with faster throughput
- Run two systems (up to 24 cells) from one computer workstation
- Reduced strain on critical lab resources
- Enhanced security and compliance with 21 CFR Part 11
- Lower cost per diffusion test

PHOENIX DRY HEAT DIFFUSION TESTING SYSTEMS



ORDERING INFO

For more information, please contact your local Teledyne Hanson Research representative or email us at: hansonsales@teledyne.com

PHOENIX DIFFUSION TESTING SYSTEMS

59-201-101 Phoenix DB-6 Manual Diffusion System, 115/230 V

59-201-201 Phoenix RDS Automated Diffusion System, 115/230 V

59-207-010 Diffusion Block Assembly (Field Install)

59-207-011 Diffusion Block Assembly (Factory Install)

Order diffusion cells, mixers, cap kits, and accessories separately

DIFFUSION CELLS, SERIALIZED

59-207-051 Cell, Small Clear, PHX

59-207-061 Cell, Small Amber, PHX

59-207-052 Cell, Medium Clear, PHX

59-207-062 Cell, Medium Amber, PHX

59-207-053 Cell, Large Clear, PHX

59-207-063 Cell, Large Amber, PHX

CELL SLEEVES (1 EACH REQUIRED FOR SMALL/MEDIUM CELLS)

59-207-022 Cell Sleeve, Medium, PHX

59-207-023 Cell Sleeve, Small, PHX

MIXERS - PEEK, SERIALIZED (1 PER CELL)

59-207-122 Mixer, Small, 13 mm Tall, PEEK, PHX

59-207-126 Mixer, Medium, 13 mm Tall, PEEK, PHX

59-207-130 Mixer, Large, 13 mm Tall, PEEK, PHX

59-207-123 Mixer, Small, 30 mm Tall, PEEK, PHX

59-207-127 Mixer, Medium, 30 mm Tall, PEEK, PHX

59-207-131 Mixer, Large, 30 mm Tall, PEEK, PHX

CELL CAP KITS - PEEK SERIALIZED (1 PER CELL)

59-207-201 Cell Cap Kit, Small, 9 mm X 4 mm, PEEK, PHX

59-207-202 Cell Cap Kit, Small, 9 mm X 20 mm, PEEK, PHX

59-207-203 Cell Cap Kit, Small, 11.3 mm X 4 mm, PEEK, PHX

59-207-204 Cell Cap Kit, Small, 11.3 mm X 20 mm, PEEK, PHX

59-207-215 Cell Cap Kit, Medium, 11.3 mm X 4 mm, PEEK, PHX

59-207-216 Cell Cap Kit, Medium, 11.3 mm X 20 mm, PEEK, PHX

59-207-217 Cell Cap Kit, Medium, 15 mm X 4 mm, PEEK, PHX

59-207-218 Cell Cap Kit, Medium, 15 mm X 20 mm, PEEK, PHX

59-207-231 Cell Cap Kit, Large, 15 mm X 4 mm, PEEK, PHX

59-207-232 Cell Cap Kit, Large, 15 mm X 20 mm, PEEK, PHX

59-207-233 Cell Cap Kit, Large, 20 mm X 4 mm, PEEK, PHX

59-207-234 Cell Cap Kit, Large, 20 mm X 20 mm, PEEK, PHX

ACCESSORIES

59-207-163 Probe Kit, Sample, PXRDS (Purchase of spares recommended)

59-209-001 Diffusion Master PC Software, PHXRDS (required)

61-107-003 Caps, Evaporation, 16 mm Reusable, Short Style (100/pk)

74-107-090 Printer, Validation, 115/230 V, Epson

91-030-150 Vials w/Pre-cut Septum, HPLC/UPLC, 12 mm X 32 mm (100/Box)

91-030-159 Vial Tray, Waters, PHXRDS

91-030-161 Vial Tray, Shimadzu, PHXRDS

59-207-025 Tray Plate, Waters, PHXRDS (Special order)

59-207-026 Tray Plate, Thermo, PHXRDS (Special order)

Q-PAK™ QUALIFICATION GUIDELINES

59-208-110 Q-Pak for Phoenix DB-6

59-208-210 Q-Pak for Phoenix RDS

TELEDYNE HANSON RESEARCH

9810 Variel Avenue
Chatsworth, CA 91311 USA

+1 818.882.7266
www.teledynehanson.com