

DIFFUSION CELL TEST SYSTEMS

6-Cell Manual Test System

A start-up vertical diffusion cell test system for manual use and sampling. This expanded package includes a 6-cell drive system with stainless stand, 6 vertical diffusion cells (see choices below), convenient manual sampling syringe, jacketed media replace beaker, and supply kit. The circulating waterbath must be ordered separately. The start-up manual test system is adaptable for later addition of the new Vision Microette autosampler. Please specify voltage when ordering. See USP <1724> for further information.

6-Cell Manual Test System (58-6M) - Including Cells



6-Cell Manual Test System
(pictured with recommended circulating bath option; manual sampling syringe not shown)

Please specify choice of Vertical Diffusion Cells when ordering:

58-6M System with:	p/n with Clear Cells	p/n with Amber Cells
4 mL Cells, "Small"	58-001-401	58-001-411
7 mL Cells, "Standard" (FDA-recommended for topicals)	58-001-402	58-001-412
12 mL Cells, "Large"	58-001-403	58-001-413

Circulating Waterbath System & Accessories

<i>p/n</i>	<i>Description</i>
58-001-430	Programmable Circulating Waterbath, 115 V (recommended)
58-001-431	Programmable Circulating Waterbath, 230 V (recommended)
58-001-721	Start-up Tool Kit, 115 V (recommended) Includes vacuum pump, service vessel assembly, and applicator
58-001-722	Start-up Tool Kit, 230 V (recommended) Includes vacuum pump, service vessel assembly, and applicator
91-030-138	Applicator/Mixer, Polyethylene
91-030-155	Manual Sampling Syringe
91-030-150	HPLC Vials w/ Pre-Cut Septums, 12 mm x 32 mm (100/pk) (recommended)
58-001-716	Check Valves (100/pk) (recommended)
58-001-815	Q-Pak IQ/OQ/PQ for Manual Diffusion Cell System (recommended)
91-030-062	Membrane for Cells, 25 mm dia x 0.45 micron (100/pk) (recommended)

Vision® Microette™ Automated Test System



Vision Microette Autosampler

The Vision Microette (2014) is a modern update of the popular Hanson MicroettePlus (introduced in 2001), including all the feature and performance characteristics of its predecessor, and more. The system provides precise automatic sampling from topical Vertical Diffusion Cells and collection into HPLC or UPLC vials for sample analysis. *For reference, see USFDA Guideline SUPAC-SS, and USP <1724> Semisolid Drug Products – Performance Tests.*

The Vision Microette system automates sampling from groups of 6 Vertical Diffusion Cells for extensive unattended tests, and handles surfactants, saline, and hydroalcoholic receptor solutions. The Microette is an ideal research and quality control tool for the study of topical and transdermal drug delivery formulations, as well as ophthalmics, cosmetics, skin care products, and pesticides.

The Vision Microette now includes two models: a versatile “multi-group” system handling up to 3 sets of Vertical Diffusion Cells (VDCs), and a lower cost “single-group” system automating 1 set of VDCs. Both models incorporate Hanson “AutoPlus” technology, and include a precision 6-channel syringe pump, PEEK valves and inert sample tubing, user-friendly programming with touchscreen graphical display, up to 100 test protocols, ComSwitch for system communications, automatic media replace at time of sampling, jacketed media replace beaker, cell volume evaluation kit, and supply kit. *AutoFill Collector, Vertical Diffusion Cells, and Cell Drive systems must be ordered with each system; Circulating Waterbath and other accessories are available as options.* US Patents, CE, CSA and RoHS compliant.

Vision Microette Autosampler

p/n	Description
59-101-002	Vision Microette Autosampler, Multi-Group
59-101-003	Vision Microette Autosampler, Single-Group

AutoFill Collector

p/n	Description
61-201-001	AutoFill Collector, 115/230 V
61-201-053	Rack, Collector, for 12 mm x 32 mm HPLC Vials
61-201-054	Rack, Collector, for 12 mm x 32 mm UPLC Vials <i>(For Waters Acquity UPLC System; requires Upgrade Kit 61-201-015 and 3 UPLC Vial Trays 91-030-159)</i>
61-201-015	Upgrade Kit, AutoFill for UPLC Rack <i>(required for p/n 61-201-054 UPLC Rack)</i>
91-030-159	Vial Tray, 48 Well for 2 mL UPLC Vials <i>(requires 3 trays per p/n 61-201-054 UPLC Rack)</i>
91-030-150	Vials w/ Pre-Cut Septums, HPLC/UPLC, 12 mm x 32 mm (100/pk)



AutoFill Collector

Cell Drive System *(required with system)*

Includes precision electronic 2mag (formerly Variomag) 6-Cell Drive System with control and stainless stand.

p/n	Description
58-001-420	6-Cell Drive System for Vision Microette <i>(1 per group)</i>

Circulating Waterbath System *(recommended with system)*

p/n	Description
58-001-430	Programmable Circulating Waterbath, 115 V <i>(for up to 3 groups)</i>
58-001-431	Programmable Circulating Waterbath, 230 V <i>(for up to 3 groups)</i>

Vision Microette Single-Group vs. Multi-Group

The Vision Microette now includes two models: a versatile “multi-group” system handling up to 3 sets of Vertical Diffusion Cells, and a lower cost “single-group” system automating 1 set of VDCs. The Vision Microette Multi-Group autosampler can be expanded to handle up to 3 groups of cell experiments for a total of 18 cells (6 cells per group). To expand the system, each group requires an additional 6-cell drive, cells, and AutoFill.



Vision Microette Automated Test System—Single-Group Setup—automates sampling from 1 group of 6 diffusion cells.



Vision Microette Multi-Group Setup—12 Cells—automates sampling from 2 groups of 6 diffusion cells (12 total).



Vision Microette Multi-Group Setup—18 Cells—automates sampling from 3 groups of 6 diffusion cells (18 total).

Vision Microette Multi-Group Expansion Kit

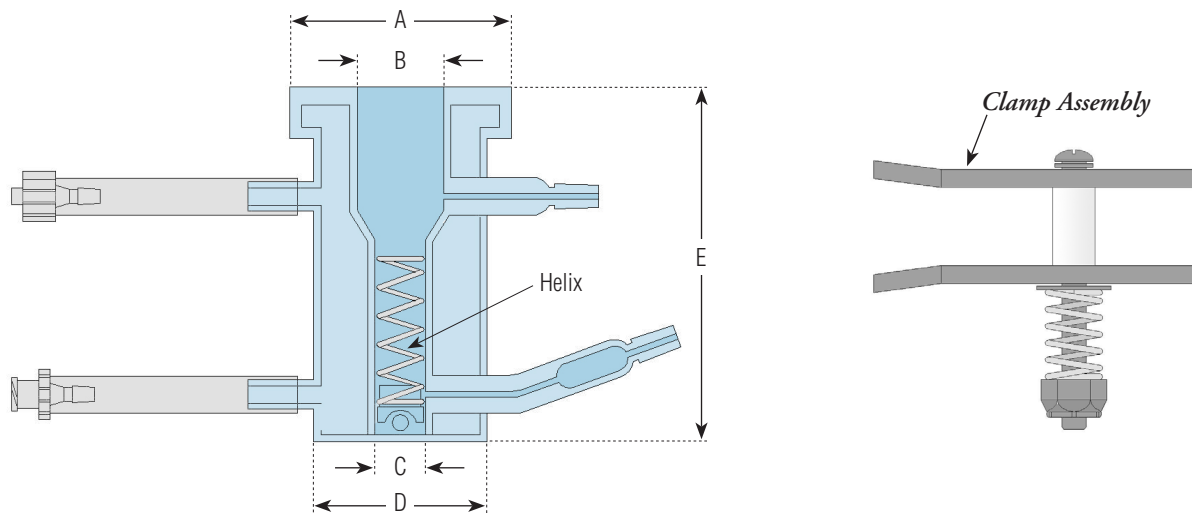
<i>p/n</i>	<i>Description</i>
58-001-720	Multi-Group Expansion Kit (order 1 per additional 6-cell group)

Vertical Diffusion Cells (required with system)

Precision vertical diffusion cells designed for ease of use and accuracy. Complete cell assemblies include receptor chamber and clamp, dosage wafer (300 mg “infinite dose”), sampling and media replace ports, outside jacket for temperature control, and Helix stirrer. Each cell includes an individual serial number; volumes listed are nominal value. *Ordering 1 extra cell with each group of 6 is strongly recommended.* Please consult Hanson for special cell requirements. See USP <1724> for further information.

Vertical Diffusion Cells

p/n	Description
58-001-451	Vertical Diffusion Cell, 9 mm Orifice, 4 mL vol, “Small”
58-001-455	Vertical Diffusion Cell, 15 mm Orifice, 7 mL vol, “Standard” <i>(recommended by FDA for topicals)</i>
58-001-459	Vertical Diffusion Cell, 15 mm Orifice, 12 mL vol, “Large”
58-001-452	Vertical Diffusion Cell, 9 mm Orifice, 4 mL vol, Amber, “Small”
58-001-456	Vertical Diffusion Cell, 15 mm Orifice, 7 mL vol, Amber, “Standard” <i>(recommended by FDA for topicals)</i>
58-001-460	Vertical Diffusion Cell, 15 mm Orifice, 12 mL vol, Amber, “Large”



Vertical Diffusion Cell

Description	For Cell Type		
	4 mL	7 mL	12 mL
Complete Clear Cell with Std Top, Clamp, and Helix	58-001-451	58-001-455	58-001-459
Complete Amber Cell with Std Top, Clamp, and Helix	58-001-452	58-001-456	58-001-460
Clear Vertical Diffusion Cell	58-001-453	58-001-457	58-001-461
Amber Vertical Diffusion Cell	58-001-454	58-001-458	58-001-462
Clamp Assembly	58-001-450	58-001-450	58-001-450
Helix Kit	58-001-467	58-001-467	58-001-468

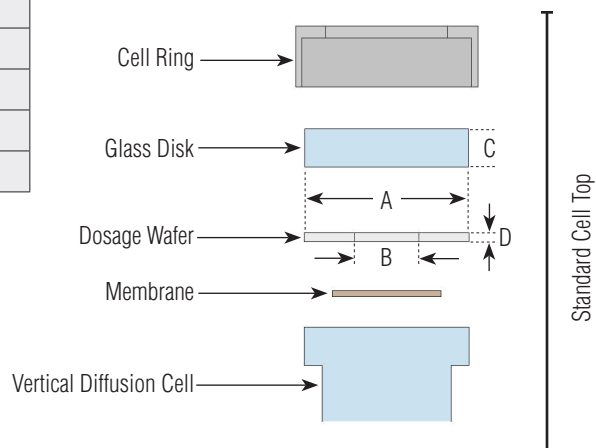
DIM	For Cell Type		
	4 mL	7 mL	12 mL
A	Ø38 mm	Ø38 mm	Ø38 mm
B	Ø9 mm	Ø15 mm	Ø15 mm
C	Ø9 mm	Ø9 mm	Ø15 mm
D	Ø30 mm	Ø30 mm	Ø30 mm
E	61 mm	61 mm	61 mm

Standard Cell Tops *(included with cell)*

This top style is included with the complete cell assembly. It is occluded to minimize back diffusion during the sampling process. It is suggested to use this top style when testing more viscous materials, such as creams, gels, and ointments. Other dosage wafers available.

	For Cell Type		
Description	4 mL	7 mL	12 mL
Cell Ring	58-001-507	58-001-507	58-001-507
Glass Disk	58-001-506	58-001-506	58-001-506
Dosage Wafer	501-001-518	58-001-521	58-001-521

	For Cell Type		
DIM	4 mL	7 mL	12 mL
A	Ø38 mm	Ø38 mm	Ø38 mm
B	Ø9 mm	Ø15 mm	Ø15 mm
C	4 mm	4 mm	4 mm
D	1.5 mm	1.5 mm	1.5 mm



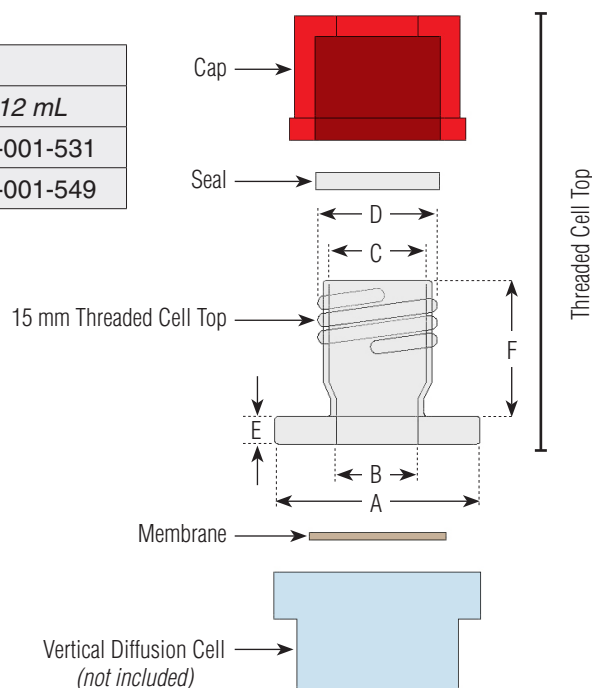
Open Cell Tops with Caps *(sold separately, cell not included)*

This Open Cell Top style is easily adaptable to the Vertical Diffusion Cell. It is typically used for less viscous donor material. The cap can be removed between sampling time points to add or remove material.

p/n	Description
58-001-530	Open Cell Top w/ Cap, 9 mm, Glass (2 mL capacity)
58-001-548	Open Cell Top w/ Cap, 9 mm, Glass, Amber (2 mL capacity)
58-001-531	Open Cell Top w/ Cap, 15 mm, Glass (6 mL capacity)
58-001-549	Open Cell Top w/ Cap, 15 mm, Glass, Amber (6 mL capacity)

	For Cell Type		
Description	4 mL	7 mL	12 mL
Threaded Cell Top	58-001-530	58-001-531	58-001-531
Amber Threaded Cell Top	58-001-548	58-001-549	58-001-549

	For Cell Type		
DIM	4 mL	7 mL	12 mL
A	Ø38 mm	Ø38 mm	Ø38 mm
B	Ø9 mm	Ø15 mm	Ø15 mm
C	Ø9 mm	Ø18 mm	Ø18 mm
D	Ø12 mm	Ø22 mm	Ø22 mm
E	6 mm	6 mm	6 mm
F	30 mm	30 mm	30 mm



Cell Accessories & Spare Parts

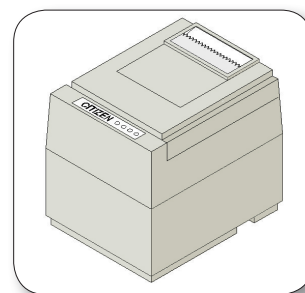
<i>p/n</i>	<i>Description</i>
58-001-450	Clamp Assembly
58-001-453	Vertical Diffusion Cell, 4 mL, Clear (<i>cell only</i>)
58-001-454	Vertical Diffusion Cell, 4 mL, Amber (<i>cell only</i>)
58-001-457	Vertical Diffusion Cell, 7 mL, Clear (<i>cell only</i>)
58-001-458	Vertical Diffusion Cell, 7 mL, Amber (<i>cell only</i>)
58-001-461	Vertical Diffusion Cell, 12 mL, Clear (<i>cell only</i>)
58-001-462	Vertical Diffusion Cell, 12 mL, Amber (<i>cell only</i>)
58-001-467	Helix Cell Kit, 9 mm (<i>for 4 mL & 7 mL cell</i>)
58-001-468	Helix Cell Kit, 15 mm (<i>for 12 mL cell</i>)
58-001-506	Glass Cell Disk
58-001-507	Cell Ring
58-001-518	Dosage Wafer, 9 mm (<i>for 4 mL cell</i>)
58-001-521	Dosage Wafer, 15 mm (<i>for 7 mL & 12 mL cells</i>)
58-001-556	Dosage Wafer, Double Thick, 9 mm x 3.0 mm (<i>for 4 mL cell</i>)
58-001-551	Dosage Wafer, Double Thick, 15 mm x 3.0 mm (<i>for 7 mL & 12 mL cells</i>)
58-001-529	PVC Cell Top w/ ¼-28 Port (<i>fits both 9 mm & 15 mm cells</i>)



Vertical Diffusion Cell

Printers

<i>p/n</i>	<i>Description</i>
60-200-101	Validation Printer for Autosampler, 115 V (<i>recommended</i>)
60-200-102	Validation Printer for Autosampler, 230 V (<i>recommended</i>)
47-200-703	Printer Paper Rolls (5/pk) (<i>recommended</i>)
47-200-704	Printer Ribbon (2/pk) (<i>recommended</i>)



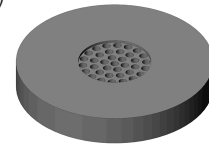
Validation Printer

Accessories & Spare Parts

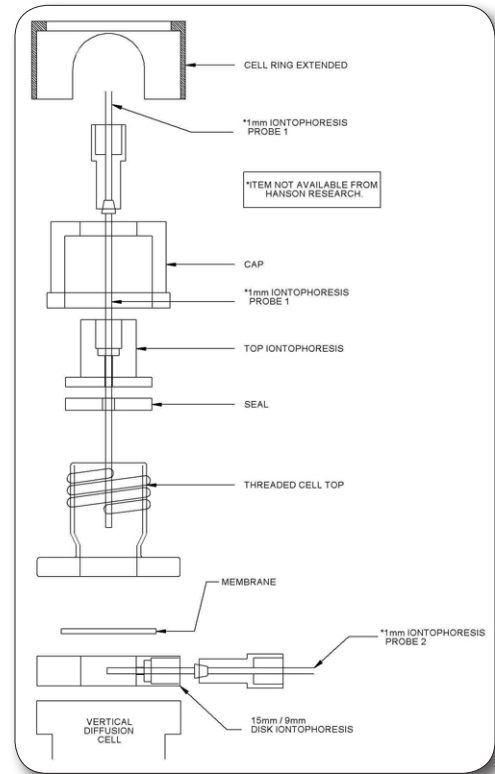
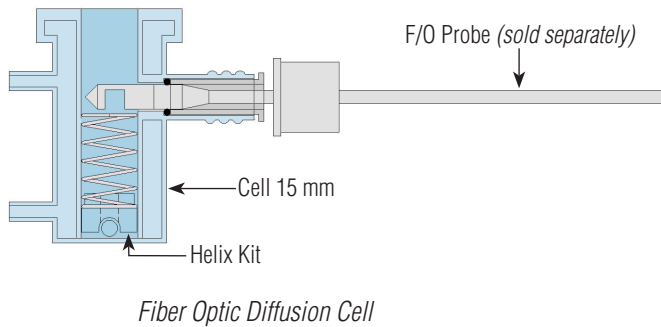
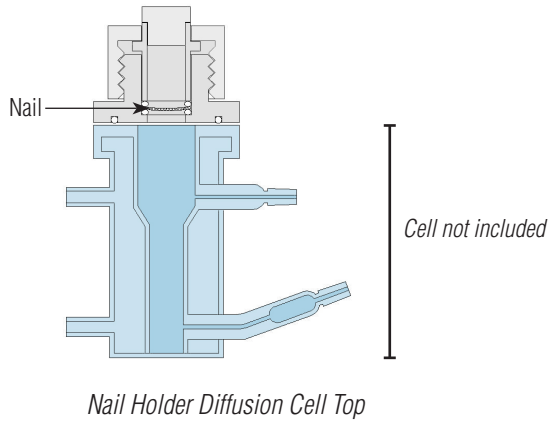
<i>p/n</i>	<i>Description</i>
58-001-721	Start-up Tool Kit, 115 V (<i>recommended</i>) Includes vacuum pump, service vessel assembly, and applicator
58-001-722	Start-up Tool Kit, 230 V (<i>recommended</i>) Includes vacuum pump, service vessel assembly, and applicator
58-001-815	Q-Pak IQ/OQ/PQ for Manual Diffusion Cell System
59-108-005	Q-Pak IQ/OQ/PQ for Vision Microette (<i>recommended</i>)
91-030-062	Membranes, 25 mm diam, 0.45 micron (100/pk) (<i>recommended</i>)
91-030-138	Applicator/Mixer, Polyethylene
91-902-020	Electro-Mechanical Tool Kit
59-107-011	Needle Cleaning Adapter Kit, 6/pk, Vision Microette and MicroettePlus (<i>recommended spare</i>)
59-107-012	Cell Cleaning Adapter Kit, Vision Microette and MicroettePlus (<i>recommended spare</i>)

Special Application Cells & Cell Tops *(Special Order)*

p/n	Description
58-001-471	Diffusion Cell Top—Finger/Toenail Holder, 10 mm, PEEK <i>(cell not included; min order 6)</i>
58-001-472	Fiber Optic Diffusion Cell, 15 mm <i>(F/O probe not included, min order 6)</i>
58-001-473	Fiber Optic Diffusion Cell, 15 mm, Amber <i>(F/O probe not included, min order 6)</i>
58-001-707	Iontophoresis Cell Top Kit, 9 mm <i>(set/6) (for 4 mL cell; cell not included)</i>
58-001-708	Iontophoresis Cell Top Kit, 15 mm <i>(set/6) (for 7 mL & 12 mL cell; cell not included)</i>
58-001-571	Patch Support <i>(replaces Glass Cell Disk and Wafer to allow for air circulation at top of patch)</i>



Patch Support Top



Iontophoresis Cell Top Diagram