



## What's New | eVol®

### eVol® - World's 1<sup>st</sup> Digitally Controlled Analytical Syringe

eVol® brings the technological advancements of laboratory liquid dispensing up to the levels seen elsewhere in the lab. eVol® is a complete dispensing solution with a broad range of functions and uses. eVol® revolutionizes the way laboratories work and the pace at which they process samples.

eVol® is the coupling of two precision devices: a digitally controlled electronic drive and an XCHANGE® (Patent Pending) enabled analytical syringe. See page 16 for further information on XCHANGE®. The result is a digitally controlled positive displacement dispensing system that can be programmed to reproducibly and accurately perform a wide variety of liquid handling procedures.

### eVol® Improves Your Laboratory Workflow and Reporting Confidence

- The programmable digital drive accurately and precisely dispenses liquids independent of the user's skills - allowing more efficient workflow scheduling and a reduction in the re-analysis of incorrectly processed or false positive samples.
- XCHANGE® analytical syringes are easily and quickly changed allowing them to be dedicated to individual liquids to prevent possible cross-contamination of reagents.



eVol®  
Every One an Expert

- To comply with stringent laboratory standards (e.g. GLP, GMP, FDA) eVol® is easily calibrated to ensure accurate dispensing at all times. eVol® is the world's first user calibrated analytical syringe. The gravimetric calibration procedure is simple, intuitive and can be performed at appropriate intervals. Calibration factors are stored for up to ten XCHANGE® syringes and quickly loaded when the syringe is changed.

Unlike air-displacement devices, eVol® is the perfect solution for accurately aspirating and dispensing both aqueous and non-aqueous liquids.



The three eVol® analytical syringe sizes can be used to accurately aspirate and dispense volumes covering a range from 200 nL to 500 µL.

- Accuracy  $\pm 0.2\%$  for a calibrated syringe at full scale.
- Precision RSD (%) at full scale:
- eVol® 500 µL syringe 0.3 %.
- eVol® 50 µL syringe 0.4 %.
- eVol® 5 µL syringe 0.5 %.

The lightweight components and ergonomic design of the eVol® increases user comfort. Simple, one-handed operation minimizes handling time and exposure to hazardous substances.

eVol® features a Touch Wheel user interface and a full-color screen. The clever menu allows all the functions to be accessed logically and quickly. The programming functions are intuitive and include help screens and prompts.

Multiple operating modes maximize the flexibility of eVol® use:

- Dispense – aspirate and dispense the same volume.
- Repeat Dispense – repetitive dispensing of a desired volume.
- Manual – aspirate and dispense of varying volumes (i.e. titrations).
- Custom – create and store methods with parameters tailored to your solution (up to 98 steps).

Custom programs can be created tailoring methods that standardize laboratory work flows, improve efficiencies, reduce variation and better utilize laboratory staff. The automation of traditionally manual processes will increase throughput and generate valuable resource savings, highly sought after in commercial laboratories.

eVol® is powered by a rechargeable, long life, Lithium-ion Battery that provides approximately 3500 dispensing cycles between charges and can be used while charging.



eVol®

#### APPLICATIONS

Typical applications for eVol® include:

- Preparation of calibration standards.
- Preparation and addition of internal standards.
- Precise dispensing of aqueous and non-aqueous liquids.
- Sample dilution.
- Instrument (GC and LC) injections.
- Serial dilutions.
- Micro titrations.
- TLC spotting.
- Routine dispensing.
- Precise measurements.
- Spiking.
- Quantitative NMR.

#### Expert Tip:

Adjustable operational speed allows for variations in sample properties, such as viscosity and/or vapor pressure.



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What's New | eVol® **SGE** Analytical Science

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## eVol® - Electronic Syringe

Part No.	Description
2910000	eVol® Electronic Syringe Starter Kit  Contains: <ul style="list-style-type: none"> <li>eVol® Electronic Syringe (handle).</li> <li>3 eVol® Syringes - 5 µL, 50 µL and 500 µL.</li> <li>Stand.</li> <li>Universal Charger.</li> <li>Comprehensive Instruction Manual.</li> <li>Disc with Manual in Multiple languages.</li> </ul>
2910005	eVol® Electronic Syringe (handle only)

## eVol® XCHANGE® Syringes



Syringe Part No.	Description	Needle Length (mm)	Needle Gauge	Needle OD (mm)	Needle ID (mm)	Needle Tip	Replacement Needle Part No.	Replacement Plunger Part No.
2910020	5 µL	50	25	0.5	0.12	Bevel	036910	2910380
2910021	5 µL (supplied without needle)	-	-	-	-	-	-	2910380
2910022	50 µL	50	25	0.5	0.2	Bevel	038110 <sup>∇</sup>	2910382
2910023	50 µL (supplied without needle)	-	-	-	-	-	-	2910382
2910024	500 µL	50	25	0.5	0.2	Bevel	039110 <sup>^</sup>	2910384
2910025	500 µL (supplied without needle)	-	-	-	-	-	-	2910384
2910026	500 µL for MEPS™ applications*	-	-	-	-	-	-	2910384

<sup>∇</sup> All SGE 25 - 500 µL replacement needles can be used with 50 µL eVol® syringes. <sup>^</sup> All SGE 1 - 2.5 mL replacement needles can be used with 500 µL eVol® syringes. \* The standard 50 µL eVol® syringe and 500 µL eVol® MEPS™ syringe can be used with the range of MEPS™ BINs. Please refer to page 30 for the listing of available MEPS™ BINs.

## Replacement Needles for 5 µL eVol® XCHANGE® Syringes

Part No.	Description	Needle Length (mm)	Needle Gauge	Needle OD (mm)	Needle ID (mm)	Needle Tip	Pack Size
036910	Suitable for 5 µL eVol® Syringe	50	25	0.5	0.12	Bevel	5
036912	Suitable for 5 µL eVol® Syringe	51 (2")	22	0.028"	0.17	LC	5
036914	Suitable for 5 µL eVol® Syringe	50	23	0.63	0.11	Cone	5
036916	Suitable for 5 µL eVol® Syringe	70	25	0.50	0.20	Bevel	5
036918	Suitable for 5 µL eVol® Syringe	70	26	0.47	0.11	Cone	5

## Replacement Needles for 50 µL and 500 µL eVol® XCHANGE® Syringes

Part No.	Description	Needle Length (mm)	Needle Gauge	Needle OD (mm)	Needle ID (mm)	Needle Tip	Pack Size
038110 <sup>∇</sup>	Suitable for 50 µL eVol® Syringe	50	25	0.5	0.2	Bevel	5
039110 <sup>^</sup>	Suitable for 500 µL eVol® Syringe	50	25	0.5	0.2	Bevel	5

<sup>∇</sup> All SGE 25 - 500 µL replacement needles can be used with 50 µL eVol® syringes. <sup>^</sup> All SGE 1 - 2.5 mL replacement needles can be used with 500 µL eVol® syringes. Refer to page 73 for replacement needles.

## Accessories for eVol®



Part No. 2910010  
eVol® Stand



Part No. 2910012  
eVol® Universal Charger



Part No. 2910030  
eVol® Charging Stand



Part No. 2910040  
eVol® Replacement Battery