

# Frespenser Pro

## Electronic Bottle-Top Dispenser

Error-free, easy to use, motorized solution

## Features

- Motor controlled digital, fatigue free operation
- High quality stepper motor provides smooth and accurate dispensing
- Adjustable aspiration and dispensing speed
- Reagent recovery feature minimizes waste
- TFT display module for simple volume selection and control
- Two operation modes: continuous dispenser or stepper

## Applications

Ideal for safe, accurate and precise dispensing of bases, saline solutions, acids and some organic solvents.



## Specifications

Volume Range	0.1-99.9 mL, Max piston lift is 10 mL, resolution is 100 $\mu$ L
Volume Accuracy	Dispenser: R = 0.3%; CV = 0.1% Stepper: R = 0.6%; CV = 0.9%
Speed	16 Levels
Operating Temperature Range	10°C-30°C
Quality Control	DIN EN ISO 8655
Control Type	External control

\* Notice: R: Relative error; CV: coefficient of variation.

Lab1st Liquid Handling range includes Pipettes (Electronic Pipettes & Mechanical Pipettes), Pipette Filler, Pipette Controller and Stepper.

### List of Lab1st models

Series	Image	Model	Application	Operation Method	Volume Range	Channel Option	Autoclavable
Mechanical Pipette		Lab1st Unique	Aqueous solution	Mechanical	0.1-10000µL	Single channel	YES
		Lab1st Precision Plus	Aqueous solution	Mechanical	0.1-5000 µL	Single Channel Adj. & Fixed;	YES
					0.5-300 µL	8 Channel Adj.; 12 Channel Adj.;	
	ComPette Pro	Aqueous solution	Mechanical	25-300 µL	Single Channel Fixed	NO	
Electronic Pipette		EliPette Pro	Aqueous solution	Electronic	0.5-1000µL	Single Channel Adj.	YES (lower part)
					0.5-300 µL	8 Channel Adj.	
	EliPette	Aqueous solution	Electronic	0.5-1000µL	Single Channel Adj.	YES (lower part)	
Pipette Filler		Eva Pro	Aqueous solution	Electronic	0.1-100mL	Single channel	YES (silicon adapter&nozzle)
		Eva Plus	Aqueous solution	Electronic	0.1-100mL	Single channel	YES (silicon adapter&nozzle)
Pipette Controller		Eva +	Aqueous solution	Mechanical	0.1-100mL	Single channel	YES (silicon adapter&nozzle)
Pipette Pump		Eva	Aqueous solution	Mechanical	2-25 mL	Single channel	NO
Stepper		Stepette	Aqueous solution, high viscosity or volatile solution	Mechanical	0.5-50 mL	Single channel	NO

In addition to Pipettes, Liquid Handling series also include various Dispensers, Electronic Burette and Vacuum Aspiration System, which are used for the pipetting, dispensing, and collection of reagents with a wider range.

### List of Lab1st models



Product Name	Bottle-Top Dispenser	New Bottle-Top Dispenser	Electronic Bottle-Top Dispenser	Electronic Burette	Vacuum Aspiration System	Economical Vacuum Aspirator
<b>Model</b>	Frespenser	Frespenser Plus	Frespenser Pro	Lab1st Patience	Vacpette Plus	Vacpette
<b>Application</b>	Reagent pipetting and liquid dispensing			Used in titration operations in chemical analysis, food industry, environmental analysis	Liquid collection and storage treatment, including cell culture medium, suspension, supernatant.	
<b>Operation</b>	Manual	Manual	Electronic	Electronic	Electronic	Electronic
<b>Volume Range</b>	0.5-5 mL 1.0-10mL 2.5-25 mL 5.0-50 mL	0.5-5 mL 1.0-10mL 2.5-25 mL 5.0-50 mL 10-100mL	0.1-99.9 mL	0.01-99.99 mL	Vacuum range: 0-600mbar Bottle volume:4L	Vacuum range: 0-500mbar Bottle volume:2L
<b>Reagent Recovery Function</b>	NO	Yes	Yes	Yes	NO	NO
<b>Features</b>	-	-Pro Glass piston (Part volume)	-	-	Sensitive level sensor,Self-closing connector	1L bottle optional, Switch manual and continuous aspiration
<b>Fully autoclavable</b>	The part where the liquid flows	Whole	-	-	The part where the liquid flows	The part where the liquid flows
<b>Accessories</b>	Screw adapter	Screw adapter	Spiral dispensing pipe	Spiral dispensing pipe	Handle adapter	Handle adapter