



Pipette Purchasing Guide:

SciLogex Knowledge Library



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Commonly used in biological, chemical, and medical laboratories, pipettes (pipettors) are essential laboratory tools for precise and accurate measurement and transportation of liquid samples. Whether you are purchasing pipettes to replace your old ones, set-up a new laboratory, or expand your existing systems, it is critical to review your applications as well as samples you will be working with first as these will determine what type or design of pipettes to get.

Looking for the most suitable pipette unit for your applications can be quite overwhelming and time consuming given with plenty of models available in the market. Understanding what your lab protocols require and exploring how multiple types of pipettes differ before buying a unit can not only save you time and money, but also improve your lab productivity and efficiency. Scilogex has prepared this simple guide to help you find the right pipette units to meet your application requirements. Continue reading for key points to consider before your next purchase.

Choosing Air Displacement Pipettes or Positive Displacement Pipettes

Be sure to check the viscosity of your samples as this will determine the type of displacement method your pipette should be capable of.

- **Air Displacement Pipettes** are piston-driven and ideal for aqueous solutions or less viscous samples. If you need units for standard pipetting activities or if you are handling volumes in microliter scale common for biology and biochemistry applications, you can go for air displacement pipettes. Samples are separated by a cushion of air, also referred to as dead volume, so it never comes in contact with the piston. Do take note that performance and accuracy of this type of pipette is affected by temperature, specific gravity, as well as atmospheric pressure.
- **Positive Displacement Pipettes** are perfect for pipetting heavy liquids, more viscous samples like oils, fats, or glycerin, or other volatile/radioactive/corrosive samples as piston is in direct contact with the liquid samples. If you are doing applications such as PCR and other DNA amplification techniques, you can get positive displacement pipettes as these come with disposable micro-syringe tips, allowing aspiration of volatile liquids without evaporation and also avoiding any instances of sample carry-over and contamination caused by the aerosol effect.

Choosing Between Electronic Pipettes and Manual Pipettes

Air displacement pipettes and positive displacement pipettes can be further classified into two types, electronic or manual. You can decide whether you need an electronic or manual pipette by reviewing your daily pipetting workload as well as how complicated your laboratory protocols are.

- **Electronic Pipettes** are ideal if applications entail you to continuously mix and add multiple reagents. With a digital interface where you can adjust volume, a motorized piston for aspirating and dispensing liquids, and options to preset programs, electronic pipettes make room for less error and make way for faster and reproducible pipetting. Electronic pipettes are also deemed to be more precise than manual ones because fewer movements are done, reducing risks of user-errors and repetitive stress injuries as well as minimizing user-to-user variation when it comes to the piston's motion. Looking for an electronic pipette that can provide adjustable volume sizes and can perform pipetting, multi-dispensing, series dispensing, and mixing? You can check out the [iPette Plus Electronic Motorized Single Channel Pipettors](#) available at Scilogex.
- **Manual Pipettes** offer durability to withstand everyday laboratory use and are easy to maintain. Adjusting or changing volumes is done manually so using this type may be time consuming and not recommended for high pipetting workloads. Searching for a manual pipette? You can check out the [MicroPette Plus Single Channel Pipettors](#) available at Scilogex.

Picking between electronic pipettes or manual pipettes will greatly depend on how much pipetting is needed for your applications. Want high-accuracy and high-precision electronic pipettes? Browse Scilogex's range of lightweight, easy-to-calibrate, and low-maintenance electronic [pipettes](#) today.

Deciding Whether to Get Single-Channel or Multi-Channel Pipettes

Your daily pipetting activities as well as expected throughput will help you decide if you must look for single-channel or multi-channel pipettes. Running only general, everyday pipetting tasks? You can get a single-channel pipette that can offer accurate measurements through one disposable tip. Single-channel pipettes will normally dispense 0.1 to 10000ul volume for most applications in the laboratory. Scilogex carries single-channel pipettors that are fully autoclavable at temperatures up to 121°C and are supplied with integral tip ejectors for access into narrow tubes such as the [MicroPette Plus Autoclavable Single-Channel Variable Pipettor](#) and the [MicroPette Plus Single Channel Autoclavable Fixed Pipettor](#).

If you will be operating largely on microtiter plates, you can purchase an 8 or 12-channel pipette capable of transferring and filling 96-well microtiter plates easily. With multi-channel pipettes, liquids are aspirated at the same time from the same well into multiple channels. Possibility of errors brought about by missing a well, introducing a bubble, or dispensing the wrong volume can be avoided through usage of multichannel pipettes. Increase lab productivity while ensuring accuracy and precision with Scilogex units like the [MicroPette Multi-Channel Pipettor](#) (non-autoclavable) and [MicroPette Plus Autoclavable Multi-Channel Pipettor](#) (fully autoclavable). These multi-channel pipettes feature staggered tip ejectors for easier tip ejection.

Other Factors to Keep in Mind

When acquiring pipettes, don't forget to also take these factors into account:

- Ergonomics

If you will be using your pipette all day everyday, it's best to consider the ergonomics of the unit. Avoid lab stress, repetitive strain injuries, and other risks by getting pipettes ergonomically designed. You can start evaluating the unit by asking the following:

- How heavy is the pipette?
- Is the pipette user-friendly?
- How much force do you need to exert in operating the pipetting button?
- How much force is required in attaching or ejecting pipette tips?

Scilogex presents a range of ergonomically designed MicroPette pipettors including multi-channel units that incorporate a head capable of rotating 360° for greater user comfort. [Scilogex pipettors](#) have clear digital displays and can be used with universal tips, offering unparalleled convenience and lowering overall running costs.

- Cleaning and Maintenance

Pipette units will last longer if well taken care of that is why it is crucial in any laboratory to adapt a maintenance routine. When choosing a unit, be sure to pick one that is easy to maintain and have strong resistance to chemicals.

- Calibration, Available Parts and Accessories, Warranty Options

It is best to get pipettes from industry leading brands that can offer hassle-free calibration, parts and accessories, as well as warranty options. At Scilogex, you are guaranteed to get units either with a free calibration PC software or units easy to calibrate and maintain through a supplied tool. Not only do we offer all our pipettes with a 1 year warranty, but we also supply a selection of parts and accessories for these.

Ensure productive and efficient laboratory protocols by investing on well-designed and appropriate pipettes. Shop smart by taking into consideration all key points presented above.

For further product assistance and recommendations, feel free to contact industry experts from Scilogex.

Meet requirements for all your areas of research with our large inventory of innovative lab equipment including electronic single-channel and multi-channel pipettes. We carry single pipettors ranging from 0.1-10000ul and multi-channel pipettors ranging from 0.5-300ul. With lab products manufactured under an ISO9001 facility to ISO13485, available warranty options, and lab experts for pre-purchase support and product recommendations, Scilogex only guarantees quality and excellence.



If you require product assistance or have any product inquiries,
feel free to contact us at 877-724-5643 or email us at info@scilogex.com today!

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