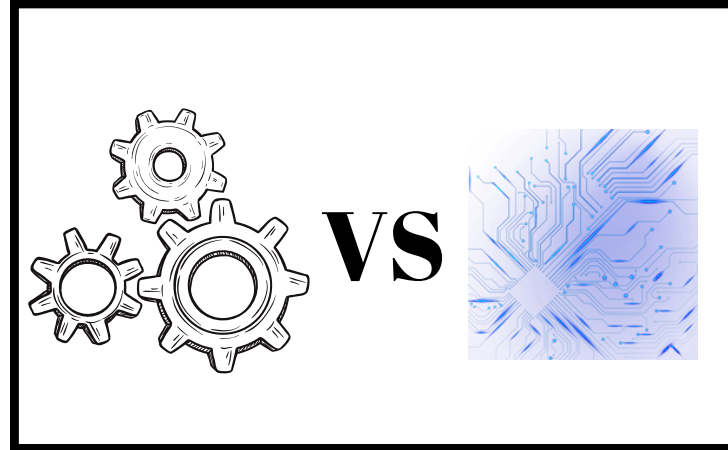


# MECHANICAL VS. ELECTRONIC PIPETTES

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Pipettes are used for various liquid handling applications and allows users to measure and dispense liquids in their desired quantities. It is therefore essential that a pipette is able to deliver accuracy as well as precision, as this furthermore guarantees quality and reproducibility for the user.



Those requiring pipettes can select either Mechanical or Electronic Pipettes, both of which offer various advantages to users depending on their application. But what exactly is the difference between a Mechanical and Electronic Pipette?

Mechanical Pipettes utilise a piston or plunger mechanism, which is operated manually by the user using their thumb to press down on the piston. This then dispenses the desired amount of liquid.

In Electronic Pipettes however, an electronically controlled motor is used to control the movement of the piston. When the correct amount of liquid is released, a brake system stops the piston. Operating buttons and display are used to program desired volumes and operating modes

# BENEFITS OF A MECHANICAL PIPETTE

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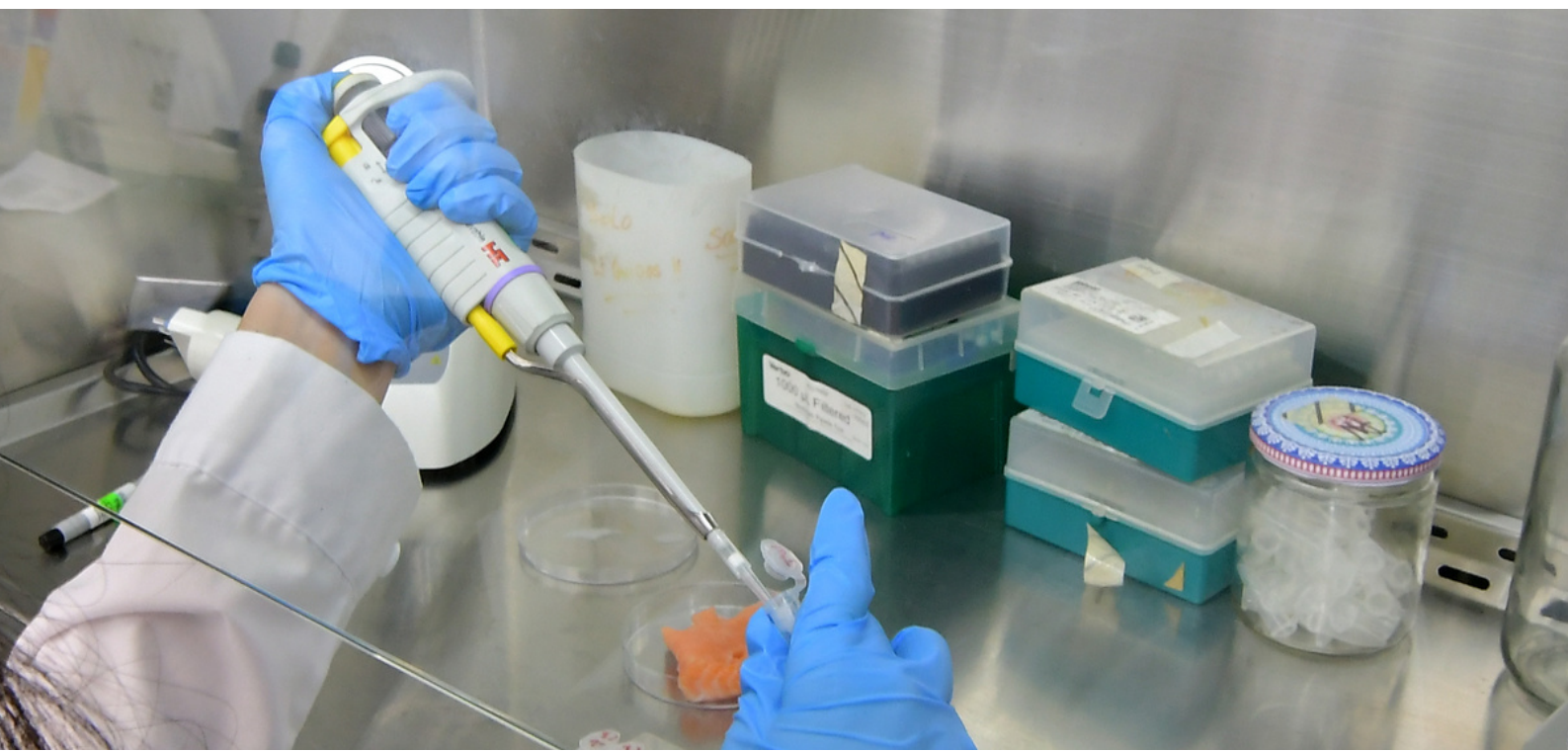
There are two main benefits associated with the utilisation of a Mechanical Pipette. These have been identified below.

## **Lower Upfront Costs:**

Mechanical Pipettes are cheaper to purchase than their electronic counterparts. Acknowledging this, a Mechanical Pipette may therefore be more suitable for those restricted by smaller budgets.

## **Ease of Use:**

It requires little time to learn how to use Mechanical Pipettes which allows lab personnel to easily be trained, furthermore saving time. Usability is therefore a major benefit when utilising Mechanical Pipettes.



# BENEFITS OF AN ELECTRONIC PIPETTE

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There are also a number of benefits associated with the utilisation of an Electronic Pipette. For example

## **Improved Ergonomics:**

When using a Mechanical Pipette for long periods of time, users are at risk of repetitive strain injury (RSI). Electronic Pipettes however, remove this risk through design features which means the pistons are operated by the push of a button.

## **Efficiency:**

As Electronic Pipettes offer a greater degree of comfort, this allows users to continue pipetting for longer periods of time, without the need of a break. As a result productivity and efficiency levels are increased when using an Electronic Pipette over a Mechanical Pipette.

## **Precision and Accuracy:**

As Electronic Pipettes utilise a motor to drive and control the movement of the piston, they are able to consistently dispense the programmed amount of liquid. This provides users more precision and accuracy when compared to a Mechanical Pipette, which is at risk of human error, as it requires users to apply the same amount of force at the same angle to dispense the correct amount of liquid.

# WHICH PIPETTE TYPE TO CHOOSE?

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Despite both Mechanical and Electronic Pipettes providing users with various benefits, it is important to select the most suitable type for your application.

Acknowledging this, users should consider the amount of pipetting your application requires. Manual Pipettes are a suitable choice for those who only occasionally need to use pipettes or pipette in low volumes. However, when your application requires you to pipette for extended periods of time, or to pipette in large volumes. Using an Electronic Pipette can prevent discomfort for the user and even prevent injury.



# MECHANICAL VS. ELECTRONIC PIPETTES

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European Instruments' expert knowledge and experience in liquid handling technology is able to maintain, repair and service most types of makes and models of pipettes. This comprehensive knowledge of such a wide range of equipment guarantees our clients can rely upon a high standard of service from one supplier.



## Key features of our service include:

Calibrations are performed by expert pipette technicians, using state of the art precision balances, who carry an Extensive inventory of original manufacturer parts.

Choose from three standard test plans: QuickCal, FullCal, UKASCal or we can develop a test plan to suit your calibration requirements.

Gravimetric evaluation based on your regulatory needs. This assessment can be made against EI service limits or customer specification. Our technical team can discuss and guide you through this process.

We offer a competitive transparent service for pipette calibration with a simple pricing structure. We do not set a minimum charge for a day; you only pay the unit price agreed

**For any queries or further guidance please contact: [Sales@ei.co.uk](mailto:Sales@ei.co.uk)**

**Or to speak to one of the team please call: 01865 750375**