

# How It Works...

## Selected technical innovations in the Eppendorf Research® 3 neo pipettes

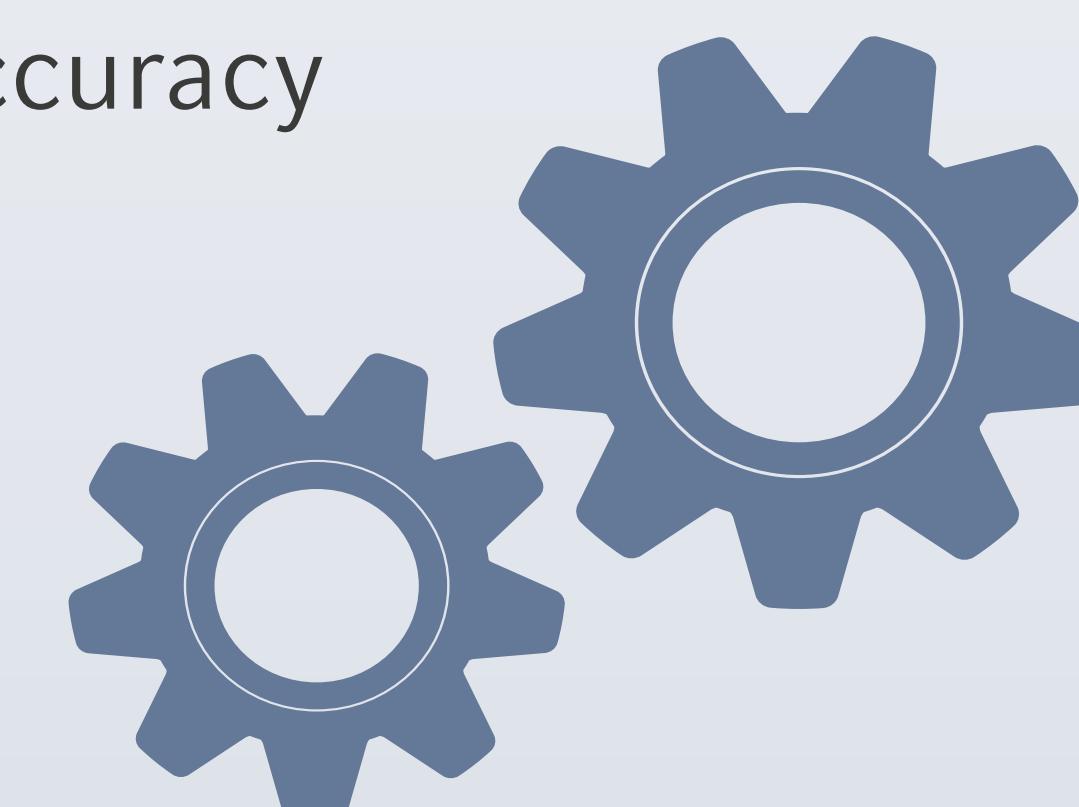
### Volume lock to protect against accidental changes

- > The volume lock switch greatly increases the force needed to adjust the volume, making accidental changes during pipetting impossible.
- > Do not adjust the volume with the lock engaged. Some movement is still possible to protect the gears from damage.



### Volume gear shift for quicker or easier adjustment

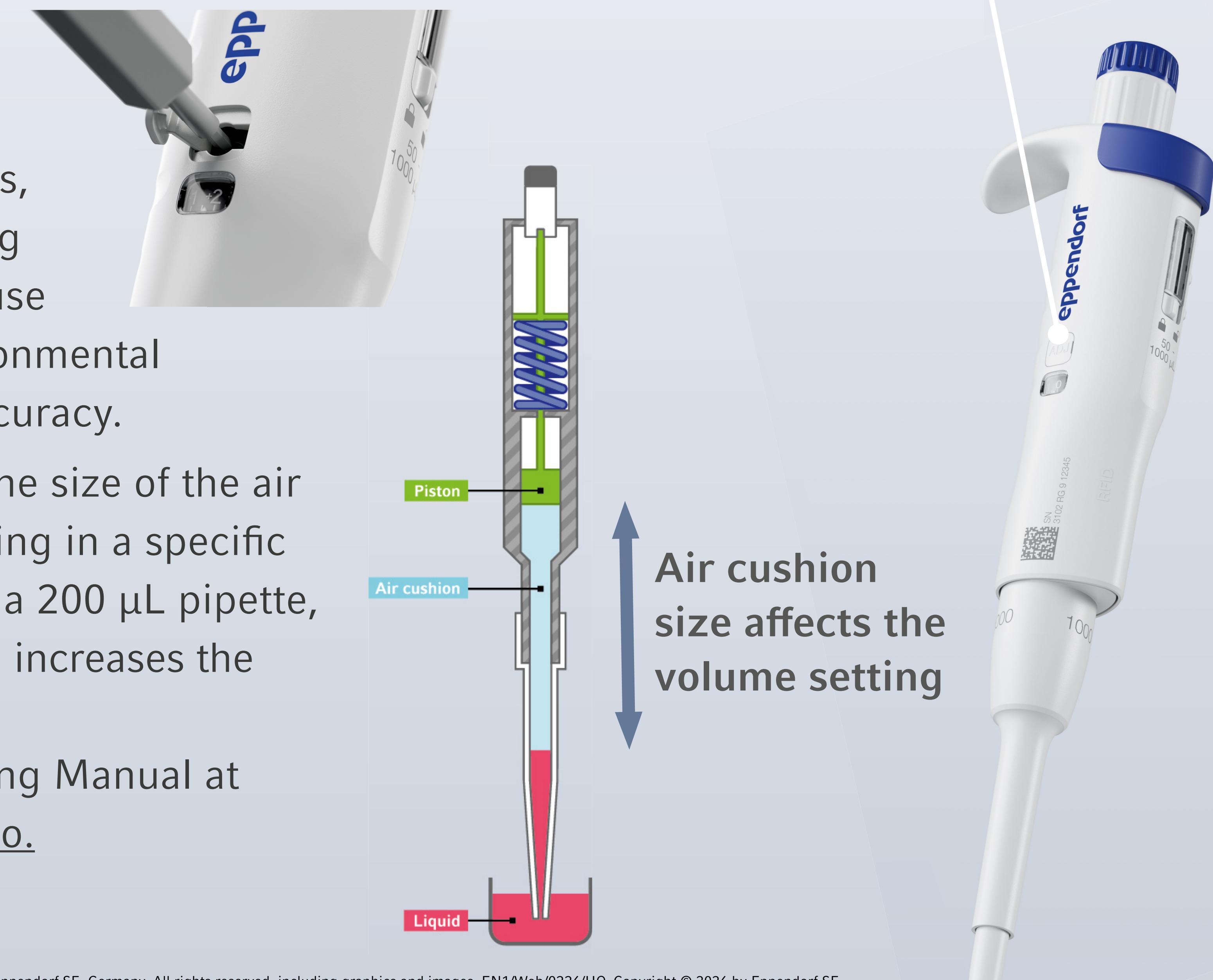
- > Like a bike gear shift, the speed adjustment switch lets you choose between two modes/gears for the counting mechanism.
- > 'Easy' mode (low gear) allows smooth, precise adjustments with more turns.
- > 'Fast' mode (high gear) enables quicker, larger changes with fewer turns but a bit more resistance.
- > 'Easy' mode is ideal for precise one-handed control, while 'fast' mode is best for quick, large adjustments.
- > Changing the volume gear shift does not affect the pipette's air cushion and adjustment (accuracy and precision remain as specified).



### Temporary adjustment to improve accuracy in different conditions

- > Temporary adjustment allows you to correct the volume when working with non-aqueous liquids, different pipette tips, or at varying altitudes. This is important because liquid type, tip design, and environmental factors can all affect pipetting accuracy.
- > Changing the adjustment alters the size of the air cushion inside the pipette, resulting in a specific volume offset: For example, with a 200 µL pipette, setting the adjustment value to +2 increases the transferred volume by 1 µL.

For more details, see the Operating Manual at [www.eppendorf.link/research3neo](http://www.eppendorf.link/research3neo).



### Torque comparison: Volume adjustment vs. everyday tasks

