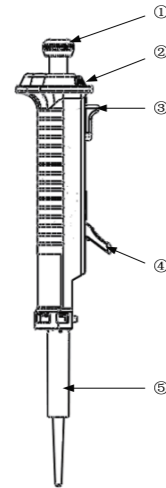


1. List of functions

- ① **Dispensing button**
By pressing the dispensing button down to the stop, the requested volume is dispensed.
- ② **Adjusting wheel**
By turning the adjusting wheel into the position 1 to 5, the requested volume is set according to Table 1.
- ③ **Filling button**
By pushing the button upward to stop, the tip is filled up.
- ④ **Fixing lever**
The fixing lever is used to secure the tip.
- ⑤ **Tip**



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2. Selecting the volume

- Use Table 1 to look for the required dispensing volume.
- The top row indicates the setting, the adjusting wheel (2) has to be set at for the volume required.
- Refer to the left-hand column to select the suitable size of tip (5).
- For the number of maximum dispensing steps, please refer to the bottom row.

Table 1

Adjusting wheel	1	2	3	4	5
0.50 ml	10 µl	20 µl	30 µl	40 µl	50 µl
1.25 ml	25 µl	50 µl	75 µl	100 µl	125 µl
2.50 ml	50 µl	100 µl	150 µl	200 µl	250 µl
5.00 ml	100 µl	200 µl	300 µl	400 µl	500 µl
12.50 ml	250 µl	500 µl	750 µl	1000 µl	1250 µl
25.00 ml	500 µl	1000 µl	1500 µl	2000 µl	2500 µl
50.00 ml	1000 µl	2000 µl	3000 µl	4000 µl	5000 µl
Steps	48	23	15	11	8

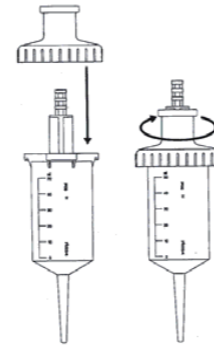
Note: The first and last dispensing liquid should be discarded back into the container vessel.

3. Inserting tip

- Push the filling button (3) down to the stop.
- Open the fixing lever (4).
- Insert tip (5), which has to lock into place.
- Push the filling button (3) down a little, and press down the fixing lever (4), which has to lock into place in tip (5).
- Use the adjusting wheel (2) to set the required dispensing volume.

Please observe:

- Tip 25 ml and 50 ml can be inserted/ locked into Stepper by means of the enclosed adapter. For this purpose, place the adapter on the tip, and fasten by turning. After use, the adapter can be removed and can be reused as often as required.



Please observe:

- In order to prevent a negative pressure and a saturation of the liquid with minute air bubbles when filling the tip, the filling button has to be pushed up slowly.
- An air bubble which might be in the upper part of the cylinder will have no influence on the accuracy as the last dispensing step will not be counted.

- The tip does not need to be completely filled.
- Tip 0.5 ml, 1.25 ml and 2.5ml can be used with the yellow or transparent 100 µl pipette tips to facilitate filling from vessels with narrow necks, and the dispensing of smaller volumes will be more precise.

4. Filling the tip

- Immerse the nozzle of tip into the liquid.
- The tip is filled by slowly pushing the filling button (3) upwards.
- Return the first dispensing step.

5. Dispensing

- Check the volume setting at the adjusting wheel (2).
- Place the nozzle of the tip at an angle to the wall of the vessel.
- Press the dosing button (1) down to the stop.

Please observe:

- The tip must be changed when the reagent is changed.
- Return the residual liquid into the vessel by pushing the filling button (3) down slowly to the stop.

6. Removing the tip

- Empty the tip completely.
- Open the fixing lever (4).
- Remove the tip from the Stepper.

Please observe:

- When the 25 ml and 50 ml tip are used, the reusable adapter can be removed from the tip by turning anti-clockwise, after removal from the Stepper.
- Avoid touching the outlet opening when removing the tip (beware of potentially aggressive solutions).
- When using viscous solutions, the tightness of the tip is not guaranteed after several dispensings.

7. Maintenance

The Stepper requires no maintenance. To avoid potential clogging rinse with warm water or isopropanol.

Please observe:

The Stepper must not be taken apart!

8. Troubleshooting

Possible failure	Reason	Remedy
Tip cannot be placed	Filling button has not been pushed to the stop	Push filling button right down to the stop
Fixing lever cannot be pushed down	Tip has not been inserted correctly	Remove tip again, push piston of the tip into the slot, push the fixing lever down to the stop
Filling button cannot be moved upwards	Fixing lever has not been pushed down completely	Press the fixing lever down to the stop
Dispensing volume error.	Adjusting wheel has not locked into place	Lock adjusting wheel into place

9. Technical Data

Weight: approx. 100g

Accuracy and precision: cf. Table 2

Liquid: bi-distilled water

Reference temperature:

20° to 25°

Celsius, ±0.5° constant

standard: ISO8655

Table 2

adjustment on Stepper	dosing volume					A %	P %
	1	2	3	4	5		
number of steps	48	23	15	11	8		
0.50ml	10µl	20µl	30µl	40µl	50µl	<± 0.8	< 0.7
1.25 ml	25µl	50µl	75µl	100µl	125µl	<± 0.8	< 0.5
2.50 ml	50µl	100µl	150µl	200µl	250µl	<± 0.8	< 0.4
5.00 ml	100µl	200µl	300µl	400µl	500µl	<± 0.4	< 0.3
12.50 ml	250µl	500µl	750µl	1000µl	1250µl	<± 0.3	< 0.3
25.00 ml	500µl	1000µl	1500µl	2000µl	2500µl	<± 0.2	< 0.3
50.00 ml	1000µl	2000µl	3000µl	4000µl	5000µl	<± 0.2	< 0.2

10. Guarantee

All Stepper provided with a series number are warranted for three years by the manufacturer, provided the unit is handled correctly in compliance with the instructions for use. If failures cannot be rectified, return the Stepper to your supplier for repair or replacement.

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