




# Inserting the locking clip Multi-channel lower part

Instructions for use

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# Inserting the locking clip – Instructions for use

## 1 Product description

Applies to multi-channel lower parts with the following nominal volumes:

- 10 µL
- 100 µL
- 300 µL

Applies to the following pipettes:

- Research<sup>®</sup> plus
- Xplorer<sup>®</sup>
- Xplorer<sup>®</sup> plus

With spring-loaded tip cones the movement can be blocked with a locking clip. To do this, all springs are replaced by locking clips.

Insert the locking clips, if you are:

- using pipette tips over an extended period.
- using pipette tips by other manufacturers and the tips bend during dispensing.

## 2 Installation

### 2.1 Releasing the multi-channel lower part

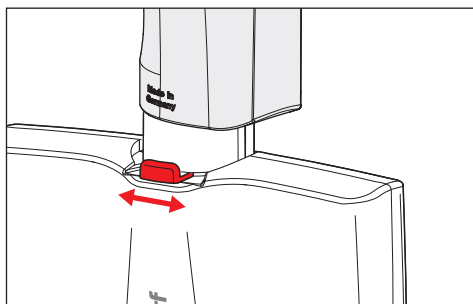


Fig. 1: Release the lever for the lower part

- ▶ Push the lever to the left or to the right and pull the lower part off.

### 2.2 Opening the multi-channel lower part

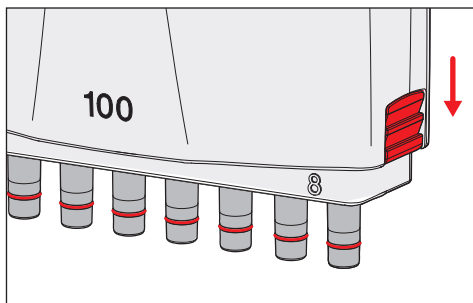


Fig. 2: Open / close cover plate latch

- ▶ Push both side latches downwards.
- ▶ Carefully remove the cover plate.
- ▶ Put down the lower part with the lever facing downwards.

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## 2.3 Removing the channel

A channel consists of a piston, a cylinder and a tip cone. To insert the locking clips, all channels must be removed.

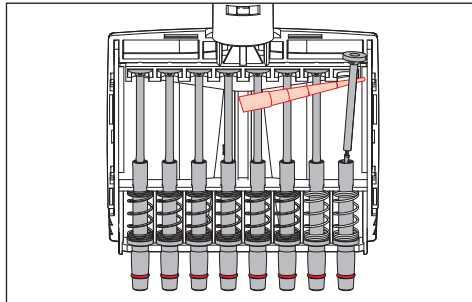


Fig. 3: Release the piston

- ▶ Release the piston from the upper rail, using a pointed object.
- ▶ Carefully remove the piston. **Do not** bend the piston.

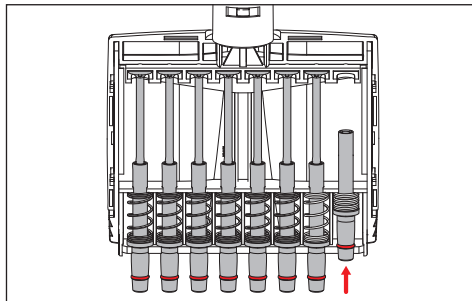


Fig. 4: Compress the spring.

- ▶ Push the tip cone in.

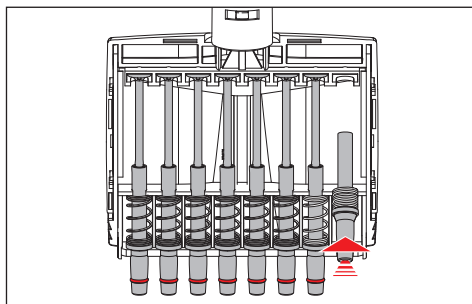


Fig. 5: Lift the tip cone

- ▶ Hold the tip cone, lift and release it from the lower rail.

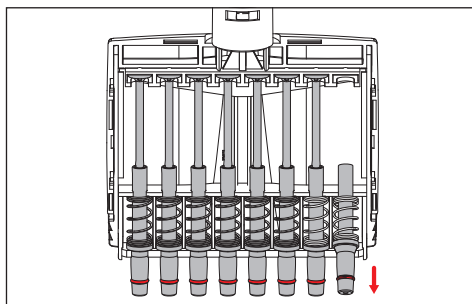


Fig. 6: Remove the tip cone

- ▶ Carefully un-tension the spring.
- ▶ Remove the tip cone and the spring from the lower rail.

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### 2.4 Fitting the channel

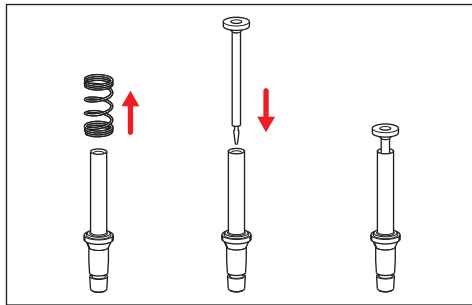


Fig. 7: Remove the spring and insert the piston

- ▶ Remove the spring.
- ▶ Insert the piston into the tip cone.



Keep the springs so that you can re-use them.

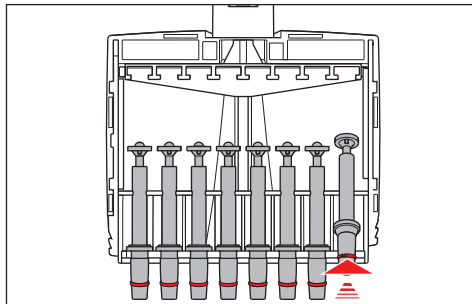


Fig. 8: Insert the piston into the tip cone.

- ▶ Insert the channels one by one, without the springs.

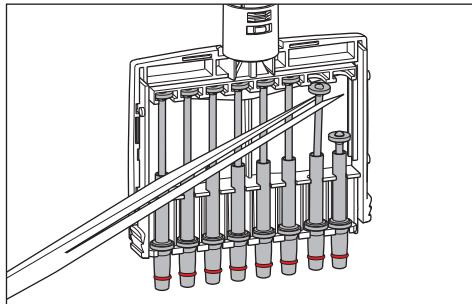


Fig. 9: Insert the pistons

- ▶ Carefully insert the pistons into the upper rail.

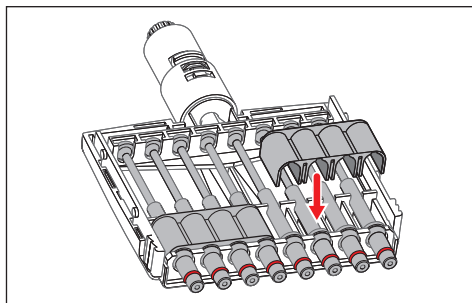


Fig. 10: Insert the locking clip

- ▶ Insert the locking clip.

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### 2.5 Closing the multi-channel lower part

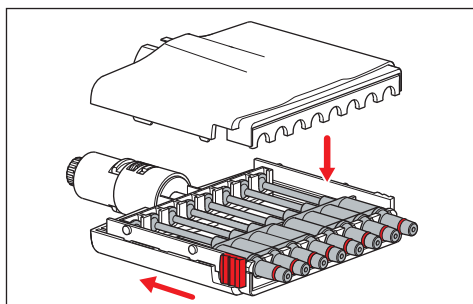


Fig. 11: Attach the cover plate

- ▶ Attach the cover plate.
- ▶ Push both side latches upwards.

### 2.6 Checking the function

Please ensure that all parts are assembled correctly.

- ▶ Carry out a gravimetric test of the systematic and random errors.

### 2.7 Removing the locking clip

#### Prerequisites

Pin from the delivery package of the pipette.

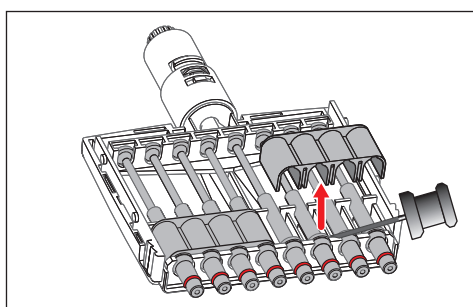


Fig. 12: Lift the locking clip using the pin

- ▶ Remove the locking clip.  
The springs can now be re-inserted.

## 3 Ordering Information

Order no. (international)	Description
3122 612.006	<b>Locking clip</b> To prevent spring loading of multi-channel lower parts (10 $\mu$ L, 100 $\mu$ L, 300 $\mu$ L)
3122 613.002	2 pieces for 8-channel lower parts 3 pieces for 12-channel lower parts



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