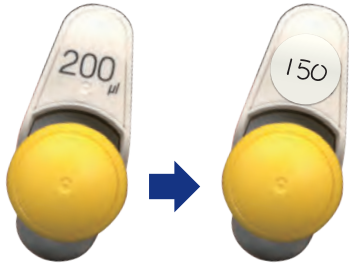


# NEXTY

Fixed volume pipette

## Volume Change Tool Kit

NT-FVC



P / No.	recommended volume range
NEXTY-F10	1–10 µL
NEXTY-F20	2–20 µL
NEXTY-F100	10–100 µL
NEXTY-F200	20–200 µL
NEXTY-F1000	100–1000 µL
NEXTY-F5000	500–5000 µL

### Necessary tools to change volume

- Volume Change Tool Kit
- Electric Balance  
(Prepare a balance with the readability according to the required precision.)
- Pipette tip (compatible to NEXTY pipette)
- Distilled water
- Thermometer, hygrometer, barometer

Something Different.

**WATSON** BIO LAB  
MADE IN JAPAN SINCE 1988

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E-mail : [tcr@watson.co.jp](mailto:tcr@watson.co.jp)

Manufacturer:

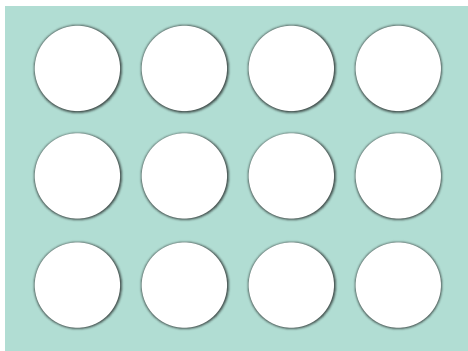
**FUKAEKASEI** CO., LTD.

### Kit items

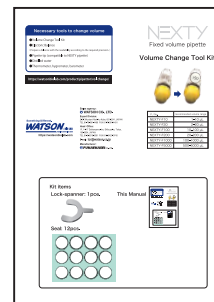
Lock-spanner: 1pc.



Seal: 12pcs.



This Manual



## Preparation

Keep the temperature and humidity at certain level in the room where the volume change is conducted. Leave the pipetter, balance, tip, container, distilled water and this kit for more than 3 hours still.

Distilled water is used for setting. Stabilize the water well in the work environment as its volume changes depending on its temperature.

## A. Target weight calculation

Calculate the weight in keeping with the environment where you conduct calibration (ref. table 2).

e.g.) To change the volume of NT-F200 to 165  $\mu\text{L}$  in the room temperature of 21.0°C, under 1,000hPa ...

$$165 (\mu\text{L}) \div 1.0031 (\mu\text{L}/\text{mg}) = 164.49 (\text{mg}) = 0.16449 (\text{g})$$

## B: To calculate the number of revolution of the push button

To get the number revolution for volume change by revolving the push button (ref. table1)

e.g.) To change the volume of NT-F200 to 165  $\mu\text{L}$  ...

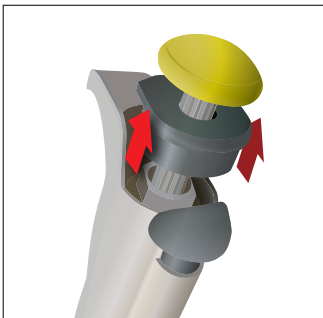
$$\frac{200 (\mu\text{L}) - 165 (\mu\text{L})}{10 (\mu\text{L})} = 3.5 (\text{revolution})$$

Table 1: Volume change per a revolution

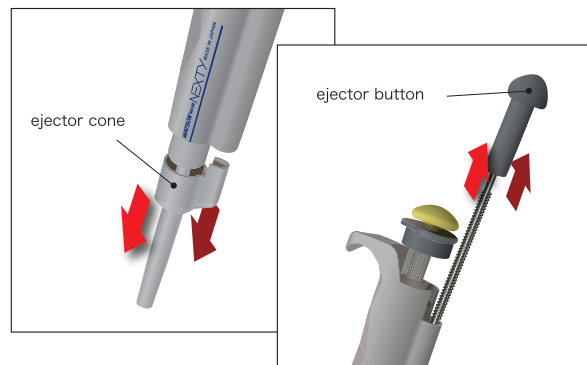
Model	volume variation ( $\mu\text{L}$ )
NEXTY-F10	1
NEXTY-F20	1
NEXTY-F100	10
NEXTY-F200	10
NEXTY-F1000	100
NEXTY-F5000	500

## Steps to change volume

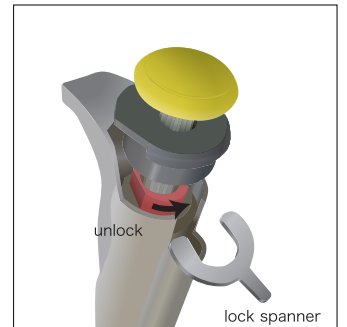
1. Remove the fixation cap underneath the push button from the top of the body.



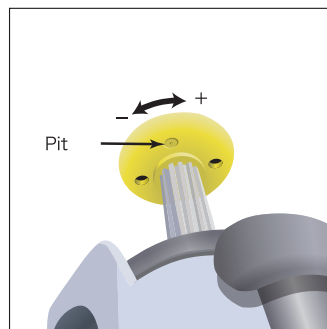
2. Pull off the ejector cone and take off the ejector button and the spring from the top of the body.



3. Fit the lock spanner on the pipetter lock and rotate it anticlockwise to unlock.



4. There is a small pit at the back of the push button. Revolve the push button toward "-" direction for the number revolution obtained in "B", using this pit to count the number of revolution. Then lock again.



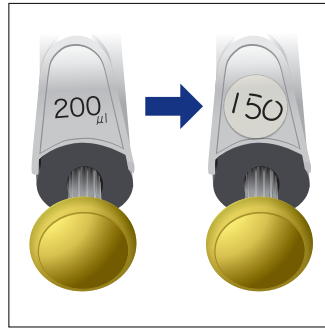
5. Fit a tip on and pre-wet it with distilled water. Then pipette a distilled water into the container placed on the balance.

6. Repeat 3,4,5 in order to make adjustments and lock it when the setting has reached the target volume.

7. Fit on ejector button, spring, ejector cone and fixation cap in reverse order of disassembly.

## Volume label customization

Volume label can be changed using the accessory sticker.



Write the volume you intend  
on the accessory sticker and affix it to the pipetter.

**Table 2 : Volume variation by temperature and atmospheric pressure** (µL/mg)

temperature °C	atmospheric pressure hPa						
	800	850	900	950	1000	1013	1050
15.0	1.001 7	1.001 8	1.001 9	1.001 9	1.002 0	1.002 0	1.002 0
15.5	1.001 8	1.001 9	1.001 9	1.002 0	1.002 0	1.002 0	1.002 1
16.0	1.001 9	1.002 0	1.002 0	1.002 1	1.002 1	1.002 1	1.002 2
16.5	1.002 0	1.002 0	1.002 1	1.002 1	1.002 2	1.002 2	1.002 2
17.0	1.002 1	1.002 1	1.002 2	1.002 2	1.002 3	1.002 3	1.002 3
17.5	1.002 2	1.002 2	1.002 3	1.002 3	1.002 4	1.002 4	1.002 4
18.0	1.002 2	1.002 3	1.002 3	1.002 4	1.002 5	1.002 5	1.002 5
18.5	1.002 3	1.002 4	1.002 4	1.002 5	1.002 5	1.002 6	1.002 6
19.0	1.002 4	1.002 5	1.002 5	1.002 6	1.002 6	1.002 7	1.002 7
19.5	1.002 5	1.002 6	1.002 6	1.002 7	1.002 7	1.002 8	1.002 8
20.0	1.002 6	1.002 7	1.002 7	1.002 8	1.002 8	1.002 9	1.002 9
20.5	1.002 7	1.002 8	1.002 8	1.002 9	1.002 9	1.003 0	1.003 0
21.0	1.002 8	1.002 9	1.002 9	1.003 0	1.003 1	1.003 1	1.003 1
21.5	1.003 0	1.003 0	1.003 1	1.003 1	1.003 2	1.003 2	1.003 2
22.0	1.003 1	1.003 1	1.003 2	1.003 2	1.003 3	1.003 3	1.003 3
22.5	1.003 2	1.003 2	1.003 3	1.003 3	1.003 4	1.003 4	1.003 4
23.0	1.003 3	1.003 3	1.003 4	1.003 4	1.003 5	1.003 5	1.003 6
23.5	1.003 4	1.003 5	1.003 5	1.003 6	1.003 6	1.003 6	1.003 7
24.0	1.003 5	1.003 6	1.003 6	1.003 7	1.003 7	1.003 8	1.003 8
24.5	1.003 7	1.003 7	1.003 8	1.003 8	1.003 9	1.003 9	1.003 9
25.0	1.003 8	1.003 8	1.003 9	1.003 9	1.004 0	1.004 0	1.004 0
25.5	1.003 9	1.004 0	1.004 0	1.004 1	1.004 1	1.004 1	1.004 2
26.0	1.004 0	1.004 1	1.004 1	1.004 2	1.004 2	1.004 3	1.004 3
26.5	1.004 2	1.004 2	1.004 3	1.004 3	1.004 4	1.004 4	1.004 4
27.0	1.004 3	1.004 4	1.004 4	1.004 5	1.004 5	1.004 5	1.004 6
27.5	1.004 5	1.004 5	1.004 6	1.004 6	1.004 7	1.004 7	1.004 7
28.0	1.004 6	1.004 6	1.004 7	1.004 7	1.004 8	1.004 8	1.004 8
28.5	1.004 7	1.004 8	1.004 8	1.004 9	1.004 9	1.005 0	1.005 0
29.0	1.004 9	1.004 9	1.005 0	1.005 0	1.005 1	1.005 1	1.005 1
29.5	1.005 0	1.005 1	1.005 1	1.005 2	1.005 2	1.005 2	1.005 3
30.0	1.005 2	1.005 2	1.005 3	1.005 3	1.005 4	1.005 4	1.005 4

## Precision repeatability (volume variation) upon customization of pipette of each volume.

It reaches the highest precision at the preset volume.

Select a model which has volume bigger than, and as close as possible to the volume you intend to customize to.

