

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

<https://watsonbiolab.com/product/pipettor/vol-change/>

Sales agency:

WATSON CO., LTD.

Export Division:

2-2-7, Murotani Nishi-ku Kobe, 651-2241, JAPAN
TEL 81-78-991-4489 FAX 81-78-991-4491

Head Office:

1F, 14-17 Daikanyama-cho, Shibuya-ku, Tokyo,
150-0034, JAPAN
TEL 81-3-5615-3591 FAX 81-3-6427-0740

E-mail : tcr@watson.co.jp

Manufacturer:

FUKAOKASEI CO., LTD.

Something Different.

WATSON BIO LAB
MADE IN JAPAN SINCE 1988

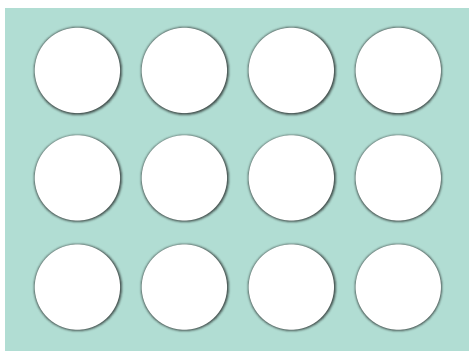
<https://watsonbiolab.com>

Kit items

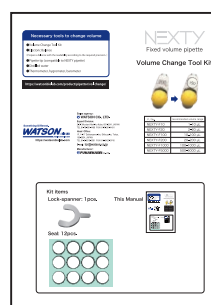
Lock-spanner: 1 pce.



Seal: 12 pcs.



This Manual



Preparation

Keep the temperature and humidity at certain level in the room where the volume change is conducted. Leave the pipette, 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-F1000 to 500 μL in the room temperature of 21.0°C, under 1,000hPa ...

$$500 (\mu\text{L}) \div 1.0031 (\mu\text{L}/\text{mg}) = 498.45 (\text{mg}) = 0.49845 (\text{g})$$

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-F1000 to 500 μL ...

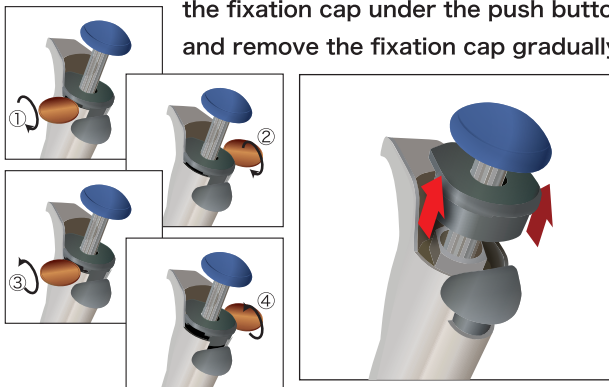
$$\frac{1000 (\mu\text{L}) - 500 (\mu\text{L})}{100 (\mu\text{L})} = 5 (\text{revolution})$$

Table 1: Volume change per a revolution

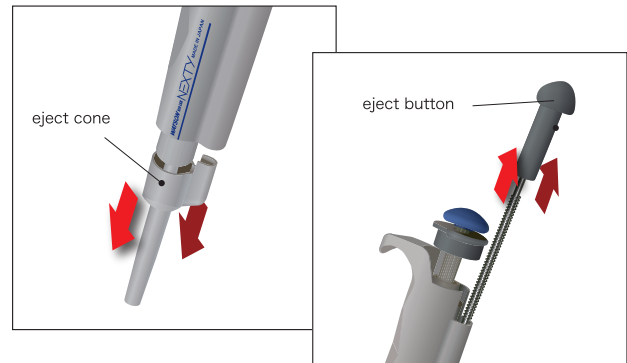
Model	volume variation (μL)
NEXTY-F10	1
NEXTY-F20	1
NEXTY-F100	10
NEXTY-F200	10
NEXTY-F1000	100
NEXTY-F5000	500

Steps to change volume

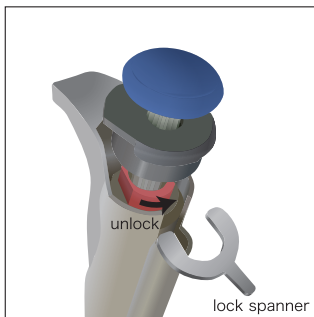
1. Insert a coin or other thin hard object beneath the fixation cap under the push button and remove the fixation cap gradually.



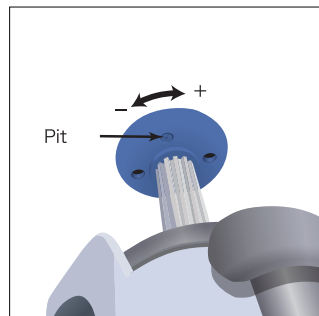
2. Pull off the eject cone and take off the eject button and the spring from the top of the body.



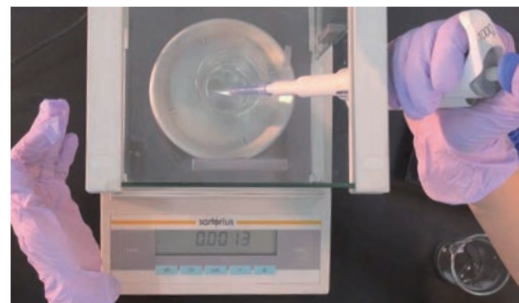
3. Fit the lock spanner on the pipette lock and rotate it anticlockwise to unlock.



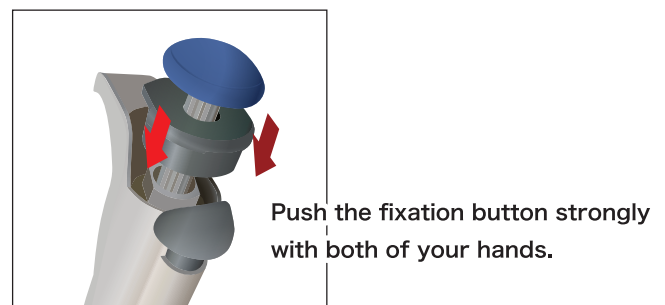
4. Adjust the volume by revolving the push button referring to the notch at the back of the button and lock it again.



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

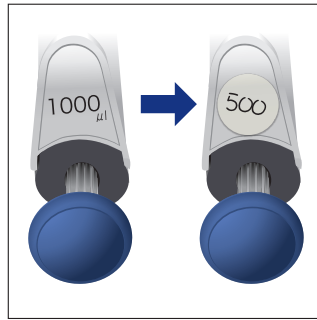


6. Repeat 3,4,5 in order to make adjustments and lock it when the setting has reached the target volume.
7. Fit on eject button, spring, eject cone and fixation cap in reverse order of disassembly.



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 pipette.

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.

