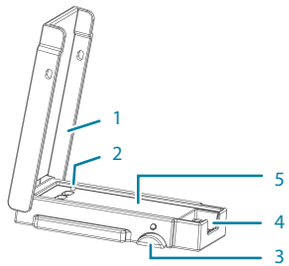
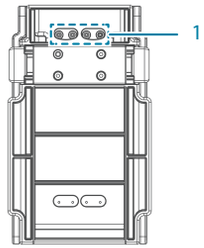
Basic components

Side view



No.	Name
1	Upper cover
2	Alignment pin
3	Latch
4	Sealing gasket groove
5	Loader body

Back view



No.	Name
1	Fluidics inlet

Preparing loading mixture

1. Take out a new PCR 8-strip tube and add the reagents according to the table below.

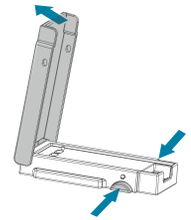
Table 1 DNB loading mixture 2

Model	Component	Volume (μL)	
		FCL	FCS
FCL SE50, FCL SE100, FCL SE400, FCL PE100, FCL PE150, FCL PE200, Small RNA FCL SE50, FCS SE100, FCS PE100, FCS PE150	DNB Load Buffer II	8	8
	Make DNB Enzyme Mix II (LC)	0.25	0.25
	DNBs	25	25
	Total volume	33.25	33.25
FCS PE300	DNB loading buffer IV	/	11.5
	DNBs	/	22.5
	Total volume	/	34
stLFR FCL PE100	DNB Load Buffer II	8.0	/
	Make DNB Enzyme Mix IV	0.31	/
	DNBs	25.00	/
	Total volume	33.31	/

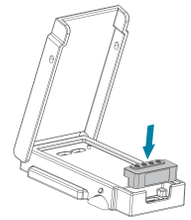
2. Gently pipette the mixture for 5 to 8 times by using a wide-bore non-filtered tip. Place it at 4 °C until use.

Installing the sealing gasket and flow cell

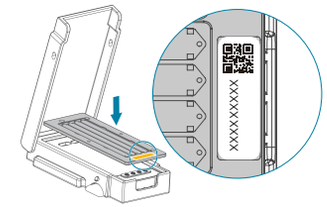
Ensure that DL-200H and the sealing gasket of it are properly maintained; If not, perform maintenance before installing the sealing gasket and flow cell.



1. Press the latches and open the cover.

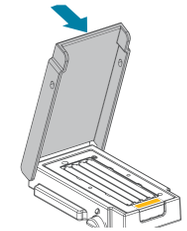


2. Place a clean sealing gasket into the groove and ensure that the gasket surface is even.

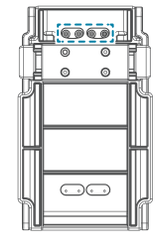


3. Align the holes of the flow cell with the alignment pins of the device and place the flow cell on it.

- Ensure that the label of the flow cell is facing upward and in the same position of sealing gasket.
- For the label location on the flow cell, refer to the area marked in yellow.



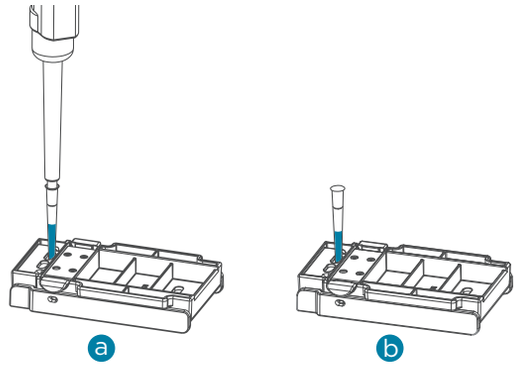
4. Close the cover and ensure that the cover is securely closed.



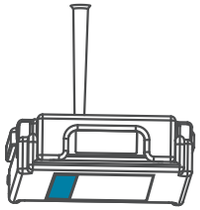
5. Place the back of the device upward, and check whether the fluidics inlets align with the holes of the sealing gasket and ensure that the holes are clean.

Loading DNBs

1. Place the device on the laboratory bench with the back upward. Aspirate 30 μL of DNB loading mixture 2 with a wide-bore non-filtered pipette tip and insert the tip into the fluidics inlet. Eject the tip from the pipette. DNBs automatically flow into the flow cell.



Do not touch or move the tip when ejecting the tip. Failure to do so might bring bubbles into the flow cell.

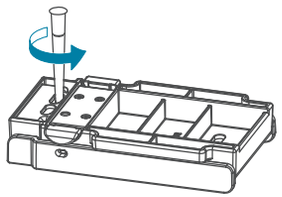


2. Keep the device parallel to the bench and maintain the back upward. Hold up the device vertically to check whether the DNBs flow into the flow cell.

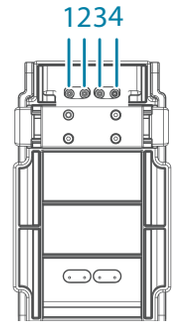
If DNBs do not flow into the flow cell, slightly press the top of pipette tip until DNBs start to flow into the flow cell.

WARNING

During observation, do not tilt the device. Failure to do so might cause liquid leakage, or even biological contamination.

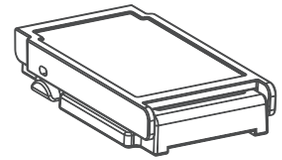


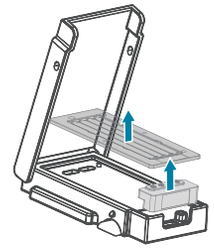
3. Ensure that all DNBs flow into the flow cell, hold the device and rotate the tip counterclockwise to remove it.



4. Repeat step 1 to 3 to load the DNBs to the rest of the lanes of the flow cell. Ensure that you load DNBs to lane 1 to 4 of the flow cell in ascending order.

5. Place the device on the bench with the front upward and wait for the DNB loading according to different sequencing:
   - For FCS PE300 sequencing, wait for 75 minutes.
   - For other sequencing model, wait for 30 minutes.





6. Open the cover and take out the flow cell and the sealing gasket.

7. After DNB loading and taking out the flow cell, immediately transfer the flow cell to the sequencer for sequencing, and perform the sequencing run after preparing sequencing reagent cartridge.

Maintaining the device and the sealing gasket

WARNING

- Do not immerse the device into the liquid for cleaning. Failure to do so might damage the device.
- Do not use the disinfectants that are not used below to clean the device, such as absolute alcohol, dichloroethane ($C_2H_4Cl_2$), trichloroethylene (C_2HCl_3), chloroform ($CHCl_3$), and toluene (C_7H_8). Failure to do so might damage the device.
- It is recommended to replace the device with a new one after using for one year.
- If you have questions about the compatibility of disinfectants, contact the technical support.

After each DNB loading, perform the following steps:

1. Wipe all sides of the device with a low-lint cloth moistened with 75% ethanol and a low-lint cloth moistened with ultra-pure water.
2. Dry it with a low-lint cloth or let it air-dry.
3. Collect the used sealing gasket into a proper beaker.
4. Fill the beaker with ultra-pure water and wash the sealing gasket in the beaker, and empty the water after wash. Repeat the wash for 2 times.
5. Fill the ultrasonic cleaner tank with ultra-pure water, and wash the sealing gasket in the ultrasonic cleaner tank for about 15 minutes.
6. Repeat step 4, place the cleaned sealing gasket into a clean container on laboratory bench and let it air-dry.