Operational Manual

High Throughput
Homogenizer FM-HTH-A100

Index

1. Safety Measures

- This instrument is designed **for indoor use only**.
- The instrument must be operated **only by trained personnel**.
- Do not attempt to open, modify, or repair the instrument yourself, as this will void the warranty and may cause hazards.
- The device complies with **CE standards**. Always use it in a **well-ventilated area**.
- Unauthorized opening of the device may cause **electric shock or other risks**.
- Ensure that the **power supply is properly grounded (earth connection)** before use.
- Confirm that the **supply voltage matches the specifications** indicated on the instrument's label.
- **Replace the power cable immediately** if it is damaged.

2. Introduction

High Throughput Homogenizer FM-HTH-A100 is equipped with high-frequency vertical vibration ensures efficient and consistent homogenization. It supports a wide range of sample types, making it versatile for various applications. This includes an emergency stop button for enhanced user protection and quick shutdown in an emergency. Our homogenizer has a reinforced motor with a strengthened main shaft for improved performance.

3. Features

- Customizable grinding settings
- High-capacity processing
- Corrosion-resistant materials
- Reliable power performance
- Flexible program configuration

4. Specifications

Model	FM-HTH-A100
Capacity	96×2 ml
Frequency Range	30 to 70 Hz
Feed Size	According to tube size
Final Fineness	~5μm
Acceleration Time	Within 2 sec
Deceleration Time	Within 2 sec
Tube Holder Materials	PTFE / Alloy steel / Aluminum alloy
Grinding Beads Diameter	0.1 to 30mm
Safety level	Emergency stop button
Noise Level	<55dB
Grinding Beads Material	Alloy steel, chrome steel, zirconia, tungsten carbide, quartz sand
Power	AC 200V to 240V, 50/60Hz
Dimension (W×D×H)	460 × 410 × 520 mm
Weight	52kg

5. Applications

High Throughput Homogenizer FM-HTH-A100 is widely used in research laboratories, pharmaceutical, and biotech industries for efficient sample homogenization. It is ideal for processing biological, chemical, and material samples in high-throughput applications.
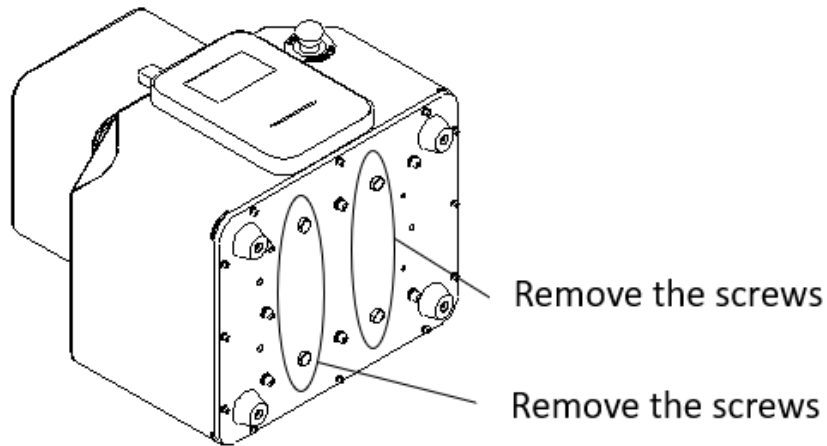
6. Operations
6.1 Structure
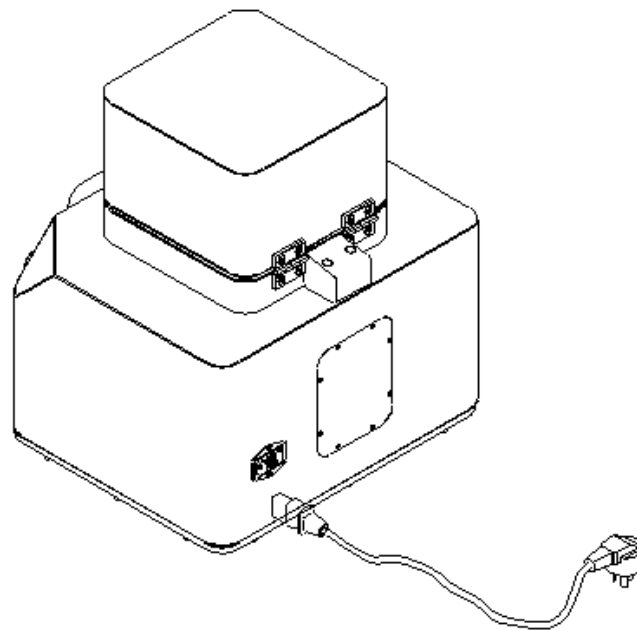
Cap lock

Touch Screen

Emergency Stop

Power Input
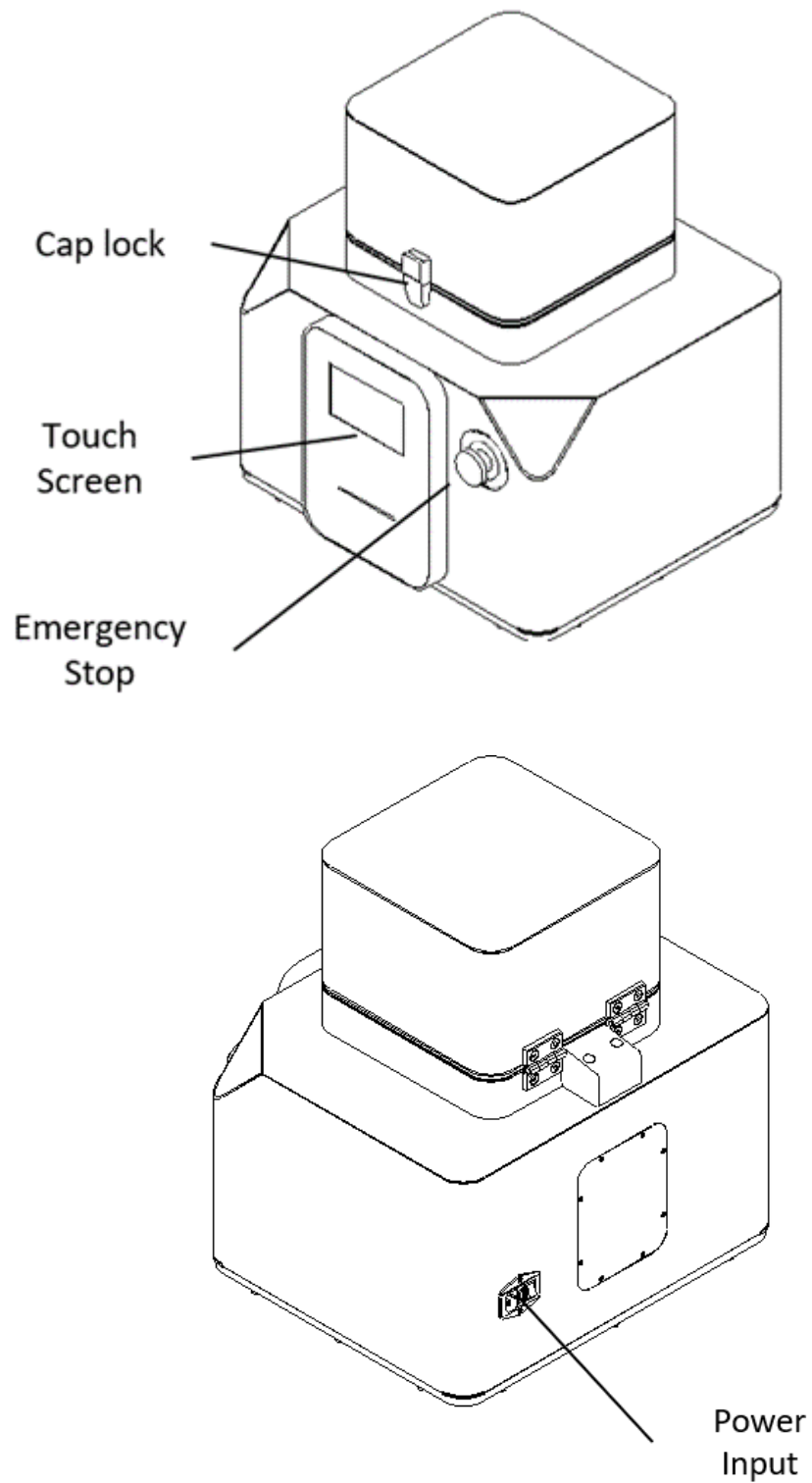
6.2 Checking up before turning on

- Check the instrument overall before turning on.
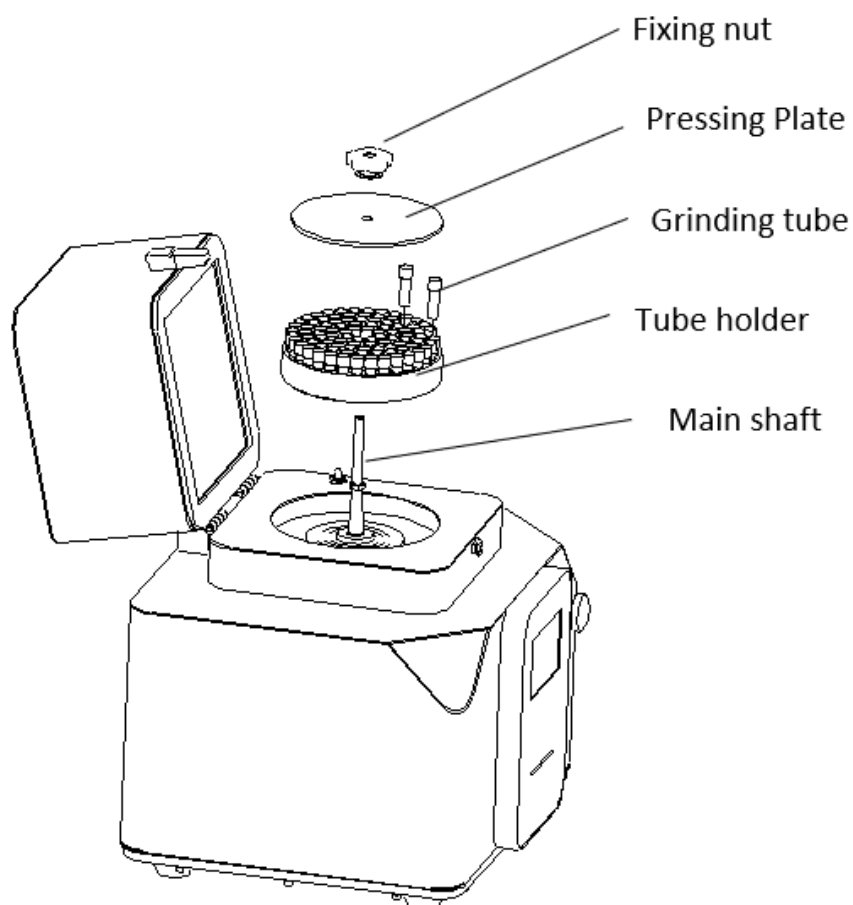- **Make sure to remove the four fixing screws on the bottom plate.**

Remove the screws

Remove the screws

6.3 Connecting to the power supply

Place the instrument on a stable and flat benchtop, connect the power line between the instrument and the power socket as picture below, the power voltage should be 200-240V.
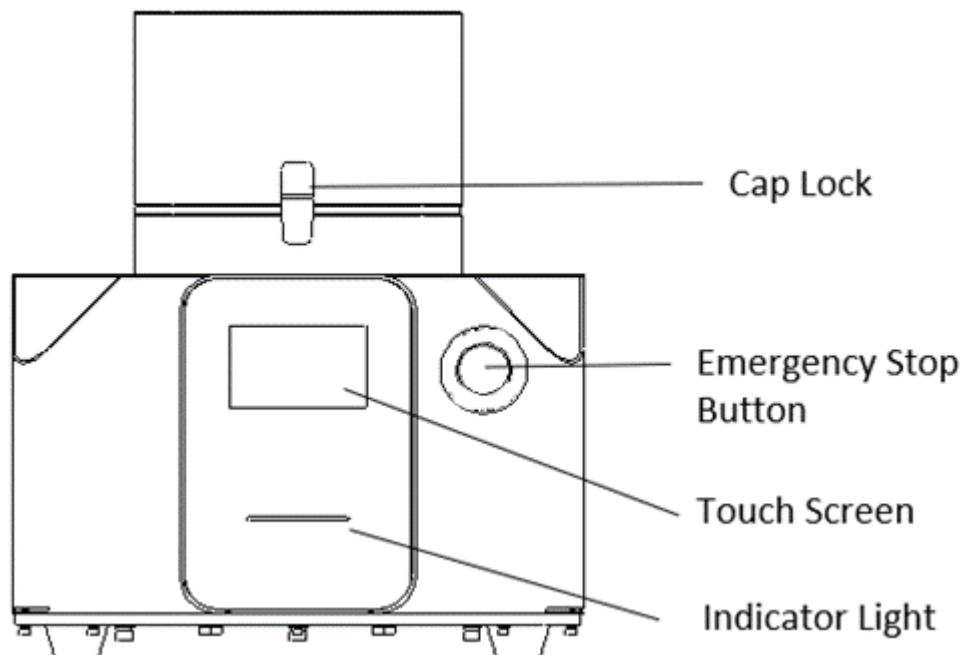
6.4 Assembly Holder

Unlock the cap lock, open the cap backward. Place the tube holder with tubes loaded onto the main shaft at proper position, make sure the tube holder cannot be turned around. Place the pressing plate on the tube holder and tighten the plate by the nut. Close the cap to operate.

6.5 Keys Instructions

Cap Lock: Lock the cap before operation. Users can check the lock icon on the screen to know whether it is locked.

Emergency Stop Button: In case of emergency, like instrument abnormal shaking, grinding tubes falling off, etc. Press this button to stop the program. Turn this button to release it from the emergency stop when the user needs to restart the instrument.
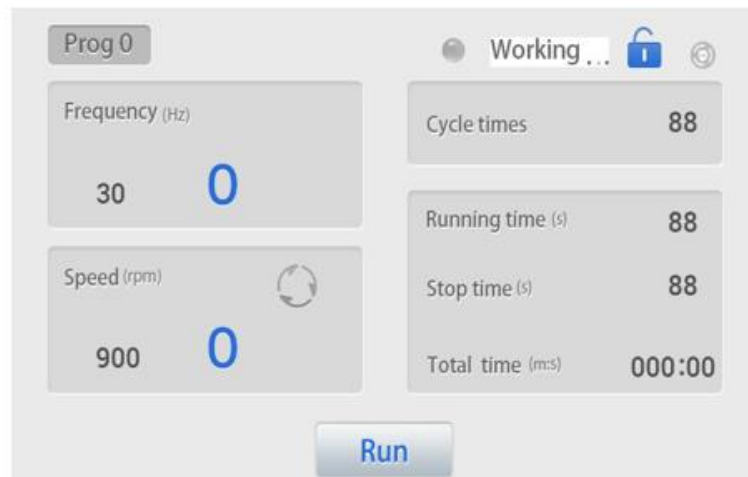
Touch Screen: Operation programs

Indicator Light: It is Blue/Red. Blue means normal operation, **Red** light means program stop.

6.6 Touch Screen

6.6.1 Start Instrument

Connect the instrument to the power supply and turn it on. The program starts to self-check, and the indicator light blinks alternately blue and red. The main interface appears 3 seconds later.

Main Interface

6.6.2 Icons on main interface

Status Icon

Program Status: Three icon colors: grey, green, red. Grey means program unworking, green means program working, red means program stops or over.

Cap Lock: There are icons for lock and unlock.

Emergency Stop: Once user presses this button, this icon turns to red. When released it turns to grey.

6.6.3 Choose Program
- Button "Prog 0" at left upper side on Main Interface, tap it to enter into the "Optional Program" interface, as picture below.
- Programs are open, everyone can be set. Prog 0 can be set up, or assigned from prog 1~8.
- Prog 1~8, also can be set up according to needs, values can be saved under power failure.

Optional Program

6.6.4 Frequency, Speed, and Time
Frequency and Speed: The black color value "30","900" is the setting value, the blue color value "0" is the instant value. The icon circle is rotating when the program runs.
Time: There are "Cycle times", "Running time", "Stop time" "Total time "
Cycle times: Cycles you set up.
Running time: Program running duration
Stop time: Program suspension duration
**Total time:** unable to set up, timer counts down since the program starts.
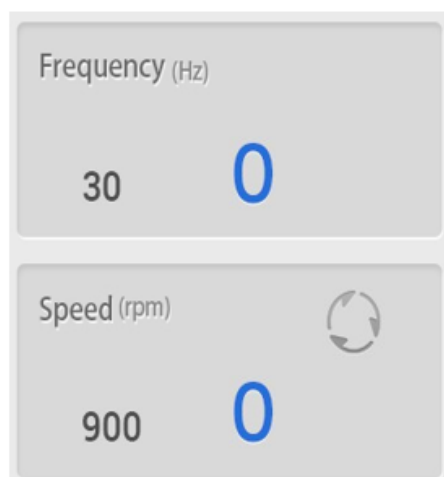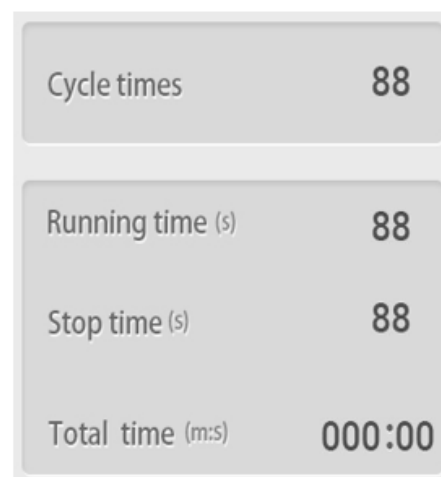
6.6.5 Parameter Setting

Tap the touch screen to start setting values for Frequency, Speed, and Time. The user can tap the number directly to input a certain value, or can slide the bar to adjust value. Frequency/Speed can be shifted by tapping each.
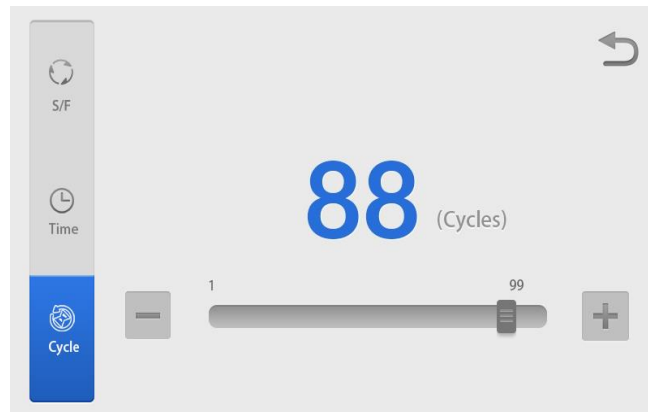
Tap the arrow at the right of the upper screen to return to main interface.
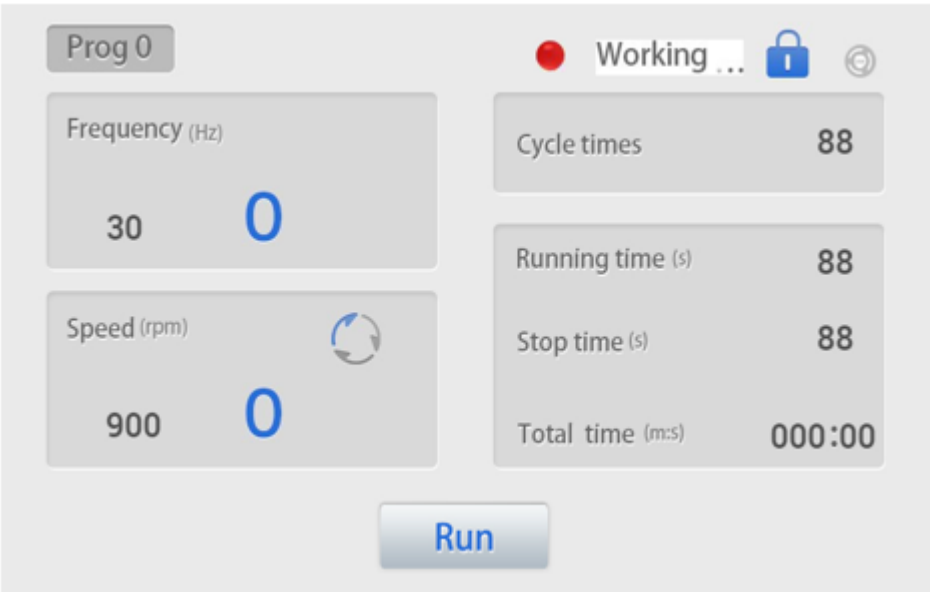

Frequency & Speed
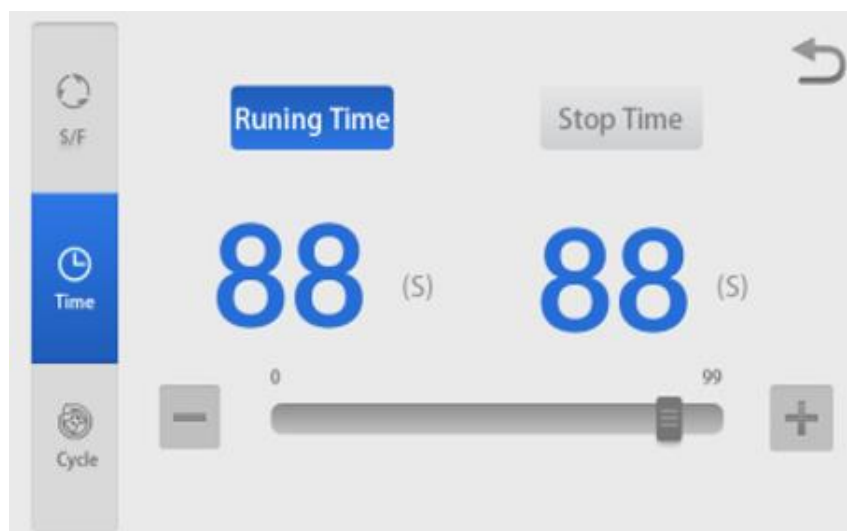
Time

Cycle

Value setting up

The user can tap the number directly to input a certain value, or can slide the bar to adjust the value. Click Enter to save.
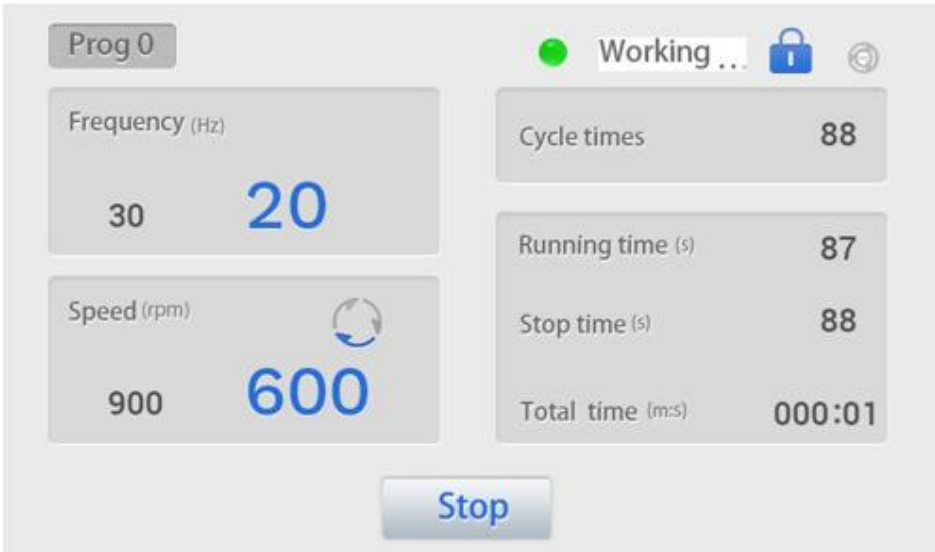

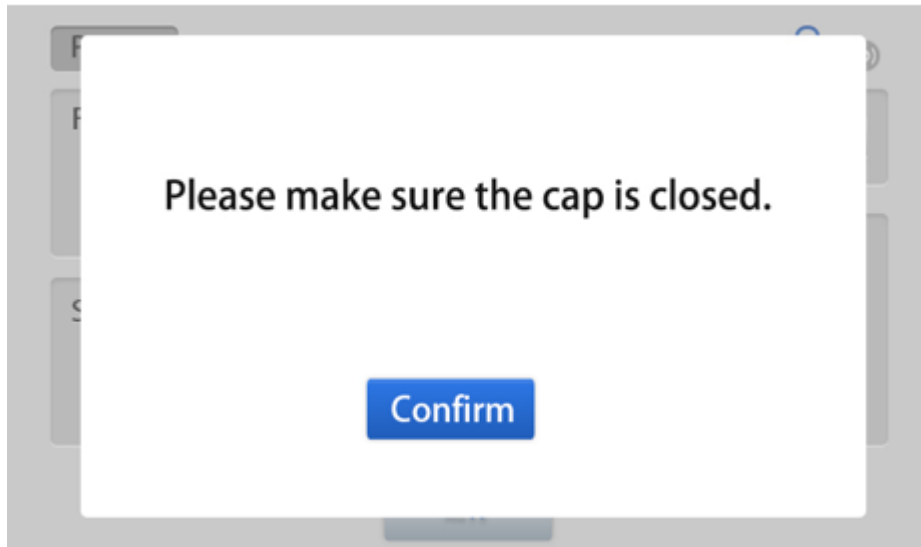Keyboard

6.6.6   Start and Stop
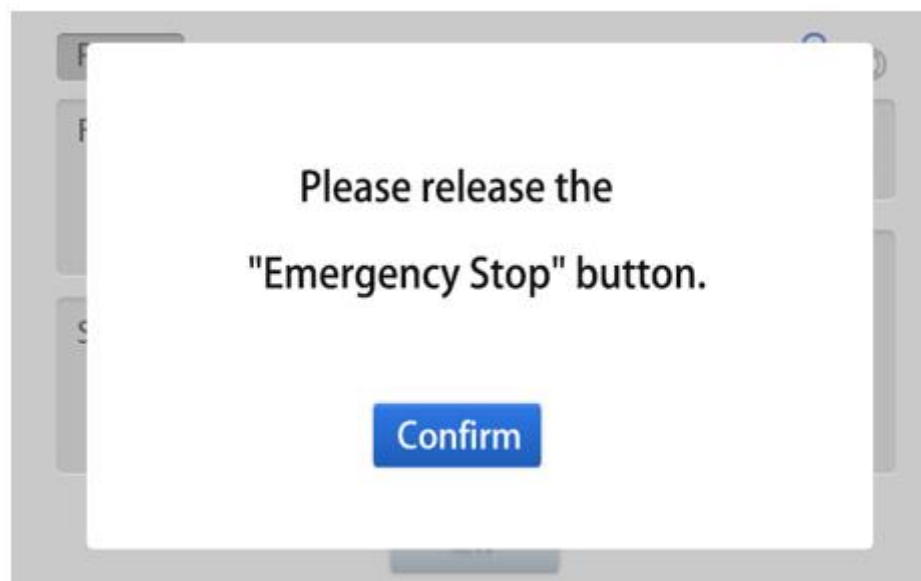

Stop Status

Running Status

6.6.7 Warning

Some warnings in case of improper operation
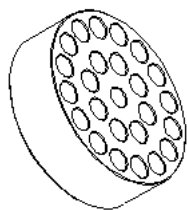1) The cap is not closed well when operating
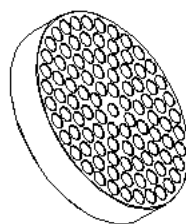

2) Warning of "Emergency Stop release".

The program will stop once any warning comes up. Please operate according to the dialog window.
Quickly press the Emergency Stop button in case of any emergency.

6.7 Tube Holder

Tube Holder-24A

Tube Holder-96A